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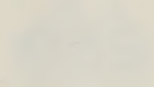
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YEAR BOOK  
OF AUSTRALIA

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AUSTRALIAN COMMONWEALTH GOVERNMENT

SYDNEY, AUSTRALIA







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1973  
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# OFFICIAL YEAR BOOK OF AUSTRALIA

No. 59, 1973

*Prepared under instructions from the Honourable the Treasurer by*

J. P. O'NEILL

COMMONWEALTH STATISTICIAN



AUSTRALIAN BUREAU OF STATISTICS

CANBERRA, AUSTRALIA

4 March 1975



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OF AUSTRALIA

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## PREFACE

By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered, subject to the Constitution, 'to make laws for the peace, order, and good government of the Commonwealth, with respect to . . . Census and statistics.' In the exercise of the power so conferred, a Census and Statistics Act was passed in 1905, and in the year following the Commonwealth Bureau of Census and Statistics was created. The first Official Year Book was published early in 1908. The publication here presented is the fifty-ninth Official Year Book issued under the authority of the Australian Government.

In the various chapters of the Year Book, and in the special index which precedes the general index, there are references to special articles, background material and items of historic interest which have appeared in previous issues.

Among new or revised material included in this issue, the following items may be especially mentioned.

Chapter 2. Physical Geography and Climate. The statistics in this chapter with the exception of area and distance have been converted to metric units.

Chapter 3. General Government. A list of all Australian Government Departments and their functions, page 76. The detailed results of the Constitution Alteration Referendums of 8 December 1973 are shown in the Appendix.

Chapter 5. Repatriation. Results of a survey of ex-service personnel, their widows and children, conducted in November 1971, page 112.

Chapter 7. Population. Final results from the 1971 Census of Population and Housing, including selected characteristics of the population.

Chapter 9. Housing and Building. Final figures from the 1971 Census of Population and Housing, page 191.

Chapter 10. Labour, Wages and Prices. Details of a new wholesale price index relating to metallic materials used in the manufacture of fabricated metal products, page 241.

Chapter 12. Transport, Communication and Travel. Preliminary results of a survey of motor vehicle usage, page 356. An article on the development of telecommunications in Australia, page 378.

Chapter 13. Welfare Services. Results of three surveys conducted in 1971 and 1972 by the Department of Social Services, page 419: (i) morbidity of new invalid pensioners in Queensland, South Australia, Western Australia and Tasmania, (ii) social service pensioners in New South Wales and Victoria receiving Repatriation war pension and, (iii) characteristics of unemployment benefit recipients.

Chapter 14. Public Health. A brief description of the benefits available to patients in approved nursing homes, page 431.

Chapter 16. National Accounts. This issue revises the structure of the accounts which is now based on the international standard described in the United Nations' *A System of National Accounts* (1968).

Chapter 20. Employment and Unemployment. Two new tables have been included on Labour Force, the first showing employment status by birth place and year of arrival in Australia, page 710 and the second showing unemployed persons according to age and whether Australian-born, page 715.

Chapter 24. Forestry. An article on softwood plantations.

Chapter 26. Mineral Industry. Brief details of the changes in the control of the export of certain metals, petroleum, petroleum products and all raw and semi-processed minerals, page 919.

Chapter 29. Final results from the 1968-69 Censuses of Wholesale Trade, and Retail Trade and Selected Services.



Most of the statistics contained in this volume relate to the years ended June or December 1972. More detailed statistics on subjects dealt with in the Year Book are available in the various annual reports published by this Bureau, and more recent statistics are contained in the *Digest of Current Economic Statistics* (monthly), the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, and in other publications issued monthly, quarterly, half-yearly, or yearly. The last pages of this volume contain a list of current and recent printed publications available for purchase, showing issue numbers, dates, and prices.

J. P. O'NEILL  
Commonwealth Statistician

Australian Bureau of Statistics,  
Canberra, A.C.T. 2600. January 1974

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## CORRIGENDA

**PAGE**

34	Second last paragraph, sixth line for 3 February 1983 read 3 February 1893									
87	Table <b>PERSONNEL STRENGTHS OF DEFENCE FORCES, AIR FORCE</b> , 1972; <i>Emergency Reserves</i> —for 685 read 621. <i>Total</i> —for 24,183 read 24,119.									
95	<b>Personnel, reserve, women's services</b> , fourth line—for 1011 read 1035; for 893 read 922.									
326	Table <b>BALANCE OF PAYMENTS BY REGIONS: AUSTRALIA</b> —									
	Overseas investment in Australian companies—					1969–70	1970–71	1971–72		
	Other countries(c) .. .. .					for	195	361	343	
						read	258	471	444	
	Total non-monetary sector transactions—									
	Other countries and international institutions(c)					for	173	234	228	
						read	248	339	353	
	<i>Total non-monetary sector transactions</i> ..					for	709		1,316	
						read	695		1,256	
594	Table <b>LOCAL GOVERNMENT AUTHORITIES</b> —									
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	Hobart Statistical Division(i) .. .. .					..	..	for	7	
								read	5	
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								read	44	
	<i>Total Tasmania</i> .. .. .					..	..	for	11	
								read	49	





## SYMBOLS AND OTHER FORMS OF USAGE IN THIS YEAR BOOK

The following *symbols*, where shown in tables, mean:

n.a. —not available

. . —nil or less than half the final digit shown, or not applicable

p —preliminary—figure or series subject to revision

r —figure or series revised since previous issue

n.e.i.—not elsewhere included

n.e.c.—not elsewhere classified

n.s. —not stated

m.—males; f.—females; p.—persons

— Break in continuity of series (where drawn across a column between two consecutive figures).

A blank space in a column of figures means that the figure concerned is not yet available.

The following *abbreviations* are used for the titles of the Australian States and Territories and the Commonwealth of Australia: N.S.W. (New South Wales), Vic. (Victoria), Qld (Queensland), S.A. (South Australia), W.A. (Western Australia), Tas. (Tasmania), N.T. (Northern Territory), A.C.T. (Australian Capital Territory), Aust. (Australia), Cwlth (Commonwealth).

In general, the *statistics in this volume relate to the States and Territories of the Commonwealth of Australia*, i.e. they exclude particulars of the External Territories of Australia, which, however, are specifically dealt with in Chapter 28, The Territories of Australia. A few series elsewhere include particulars of Papua New Guinea because of the nature of the subject-matter—these series are indicated.

*Yearly periods* shown as e.g. 1972 refer to the year ended 31 December 1972; those shown as e.g. 1971–72 refer to the year ended 30 June 1972. Other yearly periods are specifically indicated. The range of years shown in table headings, e.g. 1901 to 1971–72, indicates the period covered, but does not necessarily imply that each intervening year is included.

*Values* are shown in Australian dollars (\$) or \$A) or cents (c) unless another currency is specified.

*Reference numbers.* In the introductory paragraphs to most chapters a list of relevant publications is shown. In each case the reference number is shown in brackets and this should be quoted when ordering Bureau publications.

*Any discrepancies between totals and sums of components* in tables are due to rounding.



Unless otherwise indicated, the *British system of weights and measures* is used in this issue. In the 1974 issue of the Year Book statistics will be shown in metric units. Metric conversion factors are shown on page 1047. The weights and measures used in recording production, etc. of different commodities are as follows:

Bushel (bus)	.	.	=	approximately 2,218 cubic inches
Gallon (gal)	.	.	=	Imperial gallon of approximately 277 cubic inches
Pound (lb)	.	.	=	pound avoirdupois
Cental	.	.	=	100 pounds
Hundredweight (cwt)	.	.	=	112 pounds
Ton	.	.	=	Long ton of 2,240 pounds
Short ton	.	.	=	2,000 pounds
Bale (of wool)	.	.	=	approximately 300 pounds
Barrel (crude oil)	.	.	=	approximately 35 imperial gallons

Cereals, fruit and certain other products are generally recorded in bushels. While the weight of a bushel varies according to the nature of the product, it is also subject to considerable variation for individual products on account of such things as variety and method of packing. However, average bushel equivalent weights, as set out below, may be used for the conversion of each of these products to pounds weight avoirdupois.

**BUSHEL WEIGHTS**  
(lb per bushel)

<i>Product</i>	<i>lb per bushel</i>	<i>Product</i>	<i>lb per bushel</i>	<i>Product</i>	<i>lb per bushel</i>
Apples . . . . .	42	Maize . . . . .	56	Pineapples . . . . .	42
Apricots . . . . .	48	Mandarins . . . . .	48	Plums and prunes . . . . .	58
Bananas . . . . .	56	Mangoes . . . . .	40	Pollard . . . . .	20
Barley . . . . .	50	Millet . . . . .	60	Potatoes . . . . .	60
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Bran . . . . .	20	Nuts, other than peanuts . . . . .	40	Raspberries . . . . .	30
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Clover seed . . . . .	60	Oranges . . . . .	48	Safflower . . . . .	40
Custard apples . . . . .	35	Panicum . . . . .	60	Setaria . . . . .	60
Figs . . . . .	44	Papaws . . . . .	24	Sorghum . . . . .	60
Flax seed (pure seed) . . . . .	56	Passion fruit . . . . .	34	Soya beans . . . . .	60
Flour . . . . .	56	Peaches . . . . .	45	Strawberries . . . . .	30
Grapefruit . . . . .	42	Peanuts . . . . .	22	Sunflower seed . . . . .	33
Grass seed (most varieties) . . . . .	20	Pears . . . . .	45	Tares . . . . .	60
Lemons . . . . .	48	Peas, field (dry) . . . . .	60	Tomatoes . . . . .	48
Loquats . . . . .	45	Peas in pod (green) . . . . .	28	Wheat . . . . .	60
Lucerne seed . . . . .	60	Persimmons . . . . .	44		

## CHAPTER 1

# DISCOVERY, COLONISATION AND FEDERATION OF AUSTRALIA

### Early knowledge and discovery of Australia

The following paragraphs contain only a bare outline of the more important facts relating to the early history of Australian discovery. A more detailed summary of these facts may be found in Year Book No. 39 (*see* page 1) and earlier issues.

#### Terra Australis

Although references to an Austral land are found in the works of writers in the early centuries after Christ, and evidence appeared in maps, globes, and manuscripts from the Middle Ages onward, there is no definite evidence connecting this so-called *Terra Australis* with Australia. Cornelius Wytfliet's map of 1597, however, indicates roughly the eastern and western coasts of Australia, as well as the gulf of Carpentaria.

#### Early discoveries of Australia

The Portuguese may have discovered part of the Australian coast before 1542, and it has been suggested that the Arabs may have come to Australia even earlier, though there is no evidence to support this theory. For all practical purposes, however, the coastal exploration of Australia may be taken as having begun with the Spaniards and the Dutch.

In 1606 the Spaniard Quiros, on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group), thought he had discovered the great land of the south, and therefore named the group *La Australia del Spiritu Santo*. After leaving the New Hebrides Quiros sailed eastward, but Torres, his second-in-command, took a westerly course and passed through the strait that now bears his name. In all probability he sighted the Australian continent but no mention of it is made in his records. This voyage marks the close of Spanish activity in the work of discovery in the South Seas.

The Dutch discovered Australia when the Dutch East India Company sent the *Duyfken* from Bantam, Java, to explore the island of New Guinea. During March 1606 the *Duyfken* coasted along the southern shores of New Guinea and followed the west coast of Cape York peninsula as far as Cape Keer-Weer (Turn Again).

During the following thirty years there were nine visits by Dutch navigators to Australian waters; by 1636, through their efforts, the coast of Australia from Cape York westward around to the Great Australian Bight had been discovered.

In 1642 Abel Janszoon Tasman set out from Batavia to ascertain the extent of the great southern continent. He named Van Diemen's Land, imagining it to be part of Australia proper, and sailing north-easterly discovered New Zealand and returned to Batavia. In his second voyage in 1644 Tasman visited the northern coast of Australia, sailing round the Gulf of Carpentaria and along the north-west coast as far south as the tropic of Capricorn. This voyage of Tasman's may be said to have ended the period of Dutch discoveries, although there were subsequent visits by the Dutch to Australia (de Vlamingh in 1696 and Van Delft in 1705).

#### Discoveries by the English

In the meantime the English had made their first appearance on the Australian coast in 1688, when the north-westerly shores were visited by William Dampier, as supercargo of the *Cygnets*, a trading vessel whose crew had turned buccaneers. In 1699 he again visited Australia, in command of H.M.S. *Roebeck*, and on his return to England published an account in which a description is given of trees, flowers, birds, and reptiles observed, and of encounters with natives.

At the end of the seventeenth century it was uncertain whether Tasmania and New Zealand were parts of Australia or whether they were separated from it but themselves formed part of a great Antarctic Continent. Lieutenant (later Captain) James Cook's first voyage, though undertaken primarily for the purpose of observing the transit of Venus from Tahiti, had also the objective of ascertaining whether the unexplored part of the southern hemisphere was only an immense mass of



water or contained another continent. In command of H.M.S. *Endeavour*, and accompanied by Sir Joseph Banks the botanist, Dr Solander the naturalist, Green the astronomer, draughtsmen, and servants, Cook, after observing the transit of Venus at Tahiti, turned towards New Zealand, sighting that land on 7 October 1769 in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic Continent nor with Australia, and took formal possession thereof in the name of the British Crown.

### Discovery of Australia by Captain Cook

On 20 April 1770\* Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, on 29 April 1770\* he discovered Botany Bay, where he landed. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until 11 June 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north sailing through Torres Strait and eventually anchoring in the Downs on 13 July 1771. In 1772 Cook was put in command of the ships *Resolution* and *Adventure* with a view to ascertaining whether a great southern continent existed. Having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cook's last voyage was undertaken in 1776, and he met his death on 14 February 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance, the existence of a channel between Tasmania and Australia, was made by Bass and Flinders in 1798.

## The annexation of Australia

### Possession taken of eastern coast of Australia by Captain Cook

Although representatives of the nations mentioned in the previous section landed or claimed to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until 22 August 1770† that the history of Australia was brought into definite political connection with western civilisation. It was on that date that Captain Cook took possession 'of the whole eastern coast, from latitude 38° S. to this place, latitude 10½° S. in right of His Majesty King George the Third', i.e. over only what are now the eastern parts of New South Wales, Victoria and Queensland.

### Annexation of eastern part of Australian continent and Tasmania

Formal possession on behalf of the British Crown, of the whole of the eastern part of the Australian continent and Tasmania was not taken until 26 January 1788, when Captain Phillip's Commission, first issued to him on 12 October 1786 and amplified on 2 April 1787, was read to the people whom he had brought with him in the 'First Fleet'. The commission appointed Phillip 'Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south'.

### Extension of New South Wales westward

On 17 February 1824 Earl Bathurst notified Sir Thomas Brisbane that he had recommended to His Majesty the dispatch of a ship of war to the north-west coast of New Holland for the purpose of taking possession of the coast between the western coast of Bathurst Island and the eastern side of Coburg Peninsula. Captain James J. Gordon Bremer of H.M.S. *Tamar*, who was selected for the purpose, took possession on 20 September 1824 of the coast from the 135th to the 129th degree of east longitude. On 16 July 1825 the whole territory between those boundaries was described in Darling's commission as being within the boundaries of New South Wales.

\* Year Book No. 1 shows the dates of these events as '19th April' and '28th April' respectively. In Year Book No. 2 they have been changed to '20th of April' and '29th April', and the following footnote inserted:

1. *Correct dates of Captain Cook's Log.* After the 180° meridian of longitude had been passed, and owing to no allowance having been made for westing, the various log-books of this voyage are in error one day as to dates. Thus those in Captain Cook's private log in his official log, in Gunner Forwood's, Pickergill's, Clerke's, Wilkinson's, and Bootie's Journals, in the Pallister copy of Cook's log, and in Wharton's publication, all need correction by adding one day to the date given: that is, the 19th should read the 20th, etc. The anonymous log, doubtless Green's, is erroneously supposed by the author of the "Historical Records of New South Wales," to have been corrected for westing, see the footnote on page 269 therein. The facts are as follows:—What was known as "ship time" began a day earlier than under the present system of astronomical reckoning, that is to say, Jan. 1 began at noon Dec. 31. The "Astronomical day," however, was a whole day later than the *ship's day*: thus what would be assigned to the 24th in Cook's Journal would appear in Green's Journal as the 23rd. (See "Captain Cook's Journal," 1768–71, by Captain W. J. L. Wharton, R.N., F.R.S., London, 1893, preface pp. xii., xiii.). There can be no doubt as to the need of the correction in the dates, since on reaching Batavia the log reads:—"Wednesday 10th, according to our reckoning, but by the people here Thursday 11th." (Op. Cit., pp. 352–3.) Attention was drawn to this matter by Mr. P. de Jersey Grut in the "Argus," Melbourne, May 15, 18 and 22, 1907.

† In all issues up to Year Book No. 56 this date was incorrectly shown as 23 August 1770.

### Annexation of Western Australia

An expedition under Major Lockyer, sent by Lieutenant-General Sir Ralph Darling, then Governor of New South Wales, to found a settlement at King George Sound, sailed from Sydney on 9 November 1826, landed at the Sound on 26 December following, and on 21 January 1827 hoisted the British flag. Captain Stirling, in command of H.M.S. *Success*, arrived at Sydney a few weeks after the departure of the expedition to King George Sound. He obtained the Governor's permission to visit Swan River with a view to seizing a position on the western coast and reporting upon its suitability as a place of settlement. Captain Stirling left Sydney on 17 January 1827, and on his return in the following April submitted a glowing report on what he described as a 'rich and romantic country', urging its occupation for the purpose of settlement. He left for England in July 1827, continuing his advocacy, notwithstanding much discouragement, with unabated enthusiasm. He was at last successful, the result being due mainly to the formation of an association of prospective settlers having capital at their disposal. He was appointed Lieutenant-Governor and with a party of settlers arrived at Garden Island, near the Swan River, in the ship *Parmelia* in June 1829. On the second of the preceding month Captain Fremantle, in command of H.M.S. *Challenge*, arrived and hoisted the British flag on the south head of Swan River, again asserting possession of 'all that part of New Holland which is not included within the Territory of New South Wales'. Thus before the middle of 1829 the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

## The creation of the several Colonies

### New South Wales

In Governor Phillip's commission of 1786 the mainland of Australia was divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that the present State of Tasmania was actually joined to the mainland, and it was not until 1798 that the contrary was known. In that year Bass and Flinders proved that it was an island by sailing through Bass Strait. The territory of New South Wales, as originally constituted (1,480,527 square miles, including Van Diemen's Land 26,215 square miles), and of New Zealand (103,862 square miles), which may be included although Cook's annexation was not properly given effect to until 1840, consisted of 1,584,389 square miles. A further area of 518,134 square miles was added in 1825 when the western boundary was extended to 129th east meridian. The territory was subsequently reduced by the separation of various areas to form the other colonies, and at the time of the establishment of the Commonwealth the area of New South Wales was 310,372 square miles. Following the transfer of the Australian Capital Territory and an area at Jervis Bay to the Commonwealth in 1911 and 1915 respectively the area was further reduced to 309,433 square miles.

Lord Howe Island, which is a dependency of New South Wales, and for political purposes is included in one of the electorates of Sydney, is situated in latitude 31° 30' south, longitude 159° 5' east, about 487 miles east-north-east of Sydney, and has an area of 3,220 acres.

### Tasmania

Van Diemen's Land, first settled in 1803, was politically separated from New South Wales in 1825 being constituted a separate colony on 14 June. The area of the colony was 26,215 square miles. The name of the colony was officially changed to Tasmania in 1856 when responsible government was established. Following a resurvey of local government areas, the area of Tasmania was determined at 26,383 square miles at the end of 1964.

Macquarie Island, about 1,000 miles south-east of Hobart, together with a few rocky islets nearby, has been a part of Tasmania since the nineteenth century. In December 1911 five members of the Australasian Antarctic Expedition landed on the island and remained there until 1915. On 3 March 1948 another party was landed to man a new station which has been since maintained as a scientific base. The island is about twenty-one miles long and two miles wide.

### Western Australia

The territory westward of the 129th meridian, comprising 975,920 square miles, was constituted a colony under the name of Western Australia in June 1829. It was always distinct and independent of New South Wales, except for the settlement on King George Sound (*see above*), which remained under the jurisdiction of New South Wales until 1831.

### South Australia

On 15 August 1834 the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a 'province', and settlement took place towards the end of the year 1836. The first Governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on 28 December 1836, and on the same day the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, lying south of the 26th parallel of south latitude and between the 141st\* and 132nd

\* The actual surveyed boundary between South Australia and Victoria is at 140° 58' east longitude.



meridians of east longitude. On 10 December 1861, by authority of the Imperial Act 24 and 25 Vict., cap. 44, the western boundary of South Australia was extended to coincide with the eastern boundary of Western Australia, namely, the 129th east meridian. The area of the extension was approximately 70,220 square miles. Nearly two years later on 6 July 1863, the Northern Territory, comprising 523,620 square miles, was brought under the jurisdiction of South Australia, which thereupon controlled an area of 903,690 square miles. The Territory was transferred to the Commonwealth on 1 January 1911 (*see* page 5). Following a resurvey of Northern Territory notified in 1964 the area was reduced by 3,340 square miles.

#### **New Zealand**

Although Captain Cook had taken possession of the North Island of New Zealand in November 1769, and of the South Island in January 1770, it is doubtful whether at the time when Captain Phillip's commission was drawn up New Zealand was considered as one of the 'islands adjacent in the Pacific Ocean' (*see* page 2). The fact that under the Supreme Court Act (Imperial) of 1823 British residents in New Zealand were brought under the jurisdiction of the Court at Sydney, and that in 1839 there was a proposal on the part of the British Government to appoint a consul in New Zealand, leaves this an open question, as nothing more than extra-territorial jurisdiction may have been intended. New Zealand does not appear to have become British territory unequivocally until 1840, when Captain Hobson arrived at the Bay of Islands, and on 30 January read his commissions, which extended the boundaries of the Colony of New South Wales so as to embrace and comprehend the islands of New Zealand. In February 1840 the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on 21 May 1840 British sovereignty over the islands of New Zealand was explicitly proclaimed. New Zealand remained a dependency of New South Wales until, by letters patent of 16 November 1840, it was constituted a separate colony under the powers of the Act 3 and 4 Vict., cap. 62, of 7 August 1840. Proclamation of the separation was made on 3 May 1841. The area of the colony was 103,862 square miles. The present area of New Zealand, which acquired responsible government on 7 May 1856 and Dominion status on 26 September 1907, exclusive of island territories but including minor islands, is 103,736 square miles.

#### **Victoria**

In 1851 the 'Port Phillip District' of New South Wales was constituted the colony of Victoria, 'bounded on the north and north-west by a straight line drawn from Cape Howe to the nearest source of the River Murray and thence by the course of that river to the eastern boundary of the colony of South Australia'. The area of the new colony was 87,884 square miles, and its separate existence took effect from 1 July 1851.

#### **Queensland**

The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt, and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed into a distinct colony under the name of Queensland by letters patent dated 6 June 1859, although separation from New South Wales was not completed until 10 December of the same year. The territory comprised by the new colony was 'so much of the colony of New South Wales as lies northwards of a line commencing on the sea-coast at Point Danger in latitude about 28° 8' south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the MacIntyre River, thence downward to the 29th parallel of South latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean'. The area of the colony thus constituted was 554,300 square miles. By letters patent dated 13 March 1861, forwarded by the Colonial Secretary to the Governor of Queensland on 12 April 1862 the area of Queensland was increased by the annexation of 'so much of the colony of New South Wales as lies to the northward of the 26th parallel of south latitude, and between 141st and 138th meridians of east longitude, together with all the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria'. With this addition the area of Queensland became 670,500 square miles. Following a thorough revision of the area of each local government area of Queensland, based on the most recent maps available, the Surveyor-General in 1958 determined the area of Queensland as 667,000 square miles—a reduction of 3,500 square miles from the area previously determined.

### **The establishment of the Commonwealth of Australia**

#### **Federation**

On 1 January 1901 the colonies mentioned, with the exception of New Zealand, were federated under the name of the 'Commonwealth of Australia', the designation of 'Colonies'—except in the case of the Northern Territory, to which the designation 'Territory' applied—being at the same time changed to that of 'States'.



### Transfer of the Northern Territory to the Commonwealth

On 7 December 1907 the Commonwealth and the State of South Australia entered into an agreement for the transfer of the Northern Territory to the Commonwealth, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under The Northern Territory Surrender Act, 1907 and by the Commonwealth Parliament under the *Northern Territory Acceptance Act* 1910. The Territory was formally transferred to the Commonwealth on 1 January 1911, and became the Northern Territory of Australia.

By Imperial Order in Council dated 23 July 1931 Ashmore Islands, known as Middle, East and West Islands, and Cartier Island, situated in the Indian Ocean off the north-west coast of Australia, were placed under the authority of the Commonwealth. The islands were accepted by the Commonwealth on 10 May 1934, in the *Ashmore and Cartier Islands Acceptance Act* 1933, under the name of the Territory of Ashmore and Cartier Islands. The Act authorised the Governor of Western Australia to make ordinances having the force of law in and in relation to the Territory. An amendment to the Act in July 1938 annexed the islands to the Northern Territory, whose laws, ordinances, and regulations, wherever applicable, thereupon applied.

The area of Ashmore Reef is approximately 60 square miles (to the limit of the reef), and it is situated 220 statute miles off the western coast of Australia and 520 statute miles west of Darwin. Cartier Island is approximately 17 square miles in area (to the limit of the reef), and is situated 184 statute miles off the western coast of Australia and 490 statute miles west of Darwin.

### Transfer of the Australian Capital Territory to the Commonwealth

On 18 October 1909 the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 911 square miles as the Seat of Government of the Commonwealth. In December 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on 5 December 1910 a proclamation was issued vesting the Territory in the Commonwealth on and from 1 January 1911. By the *Jervis Bay Territory Acceptance Act* 1915 an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth, and was transferred as from 4 September 1915.

### Present composition of the Commonwealth

Following revision of the areas of Tasmania, Queensland and the Northern Territory, as mentioned on pages 3 and 4, the total area of the Commonwealth of Australia has been determined as 2,967,909 square miles. The years in which the respective areas were annexed, the years of first permanent settlement, and the years in which responsible government was granted to the Colonies, and the present areas of the several States and Territories and of the Commonwealth are shown below.

#### THE COMMONWEALTH OF AUSTRALIA: COMPONENT STATES AND TERRITORIES

<i>State or Territory</i>	<i>Year of annexation</i>	<i>Year of first permanent settlement</i>	<i>Year of formation into separate Colony or Territory</i>	<i>Year in which responsible government was granted</i>	<i>Present area in square miles</i>
New South Wales . . . . .	1770	1788	1786	1855	309,433
Victoria . . . . .	1770	1834	1851	1855	87,884
Queensland . . . . .	1770	1824	1859	(a)1859	667,000
South Australia . . . . .	1788	1836	1834	1856	380,070
Western Australia . . . . .	1829	1829	1829	1890	975,920
Tasmania . . . . .	1788	1803	1825	1855	26,383
Northern Territory . . . . .	..	..	(b)1863	..	520,280
Australian Capital Territory . . . . .	..	..	(c)1911	..	939
<b>Commonwealth of Australia . . . . .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>(d)</b>	<b>2,967,909</b>

(a) As part of New South Wales in 1855; as a separate colony in 1859. (b) Previously part of New South Wales then brought under the jurisdiction of South Australia in 1863—transferred to the Commonwealth in 1911. (c) Previously part of New South Wales. (d) Constituted as from 1 January 1901.

## The Constitution of the Commonwealth

Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the federal movement in Australia, was embodied in this chapter in issues of the Year Book up to and including No. 22.

### Commonwealth Constitution Act

The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely: 'An Act to constitute the Commonwealth of Australia', as amended by the *Constitution Alteration (Senate Elections)* 1906, the *Constitution Alteration (State Debts)* 1909, the *Constitution Alteration (State Debts)* 1928, the *Constitution Alteration (Social Services)* 1946, and the *Constitution Alteration (Aboriginals)* 1967, is given *in extenso* hereunder, and the text contains all the alterations of the Constitution which have been made up to and including 31 December 1972.

### THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT.

63 & 64 VICT., CHAPTER 12.

*An Act to Constitute the Commonwealth of Australia. (9th July, 1900.)*

WHEREAS the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established:

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian colonies and possessions of the Queen:

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled and by the authority of the same, as follows:—

1. This Act may be cited as the Commonwealth of Australia Constitution Act.
2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.
3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.
4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies may at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.
5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State: and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.
6. "The Commonwealth" shall mean the Commonwealth of Australia as established under this Act.  
 "The States" shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States; and each of such parts of the Commonwealth shall be called "a State."  
 "Original States" shall mean such States as are parts of the Commonwealth at its establishment.
7. The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.  
 Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

8. After the passing of this Act the Colonial Boundaries Act, 1895, shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

9. The Constitution of the Commonwealth shall be as follows:—

### THE CONSTITUTION.

This Constitution is divided as follows:—

- Chapter I.—The Parliament:
  - Part I.—General:
  - Part II.—The Senate:
  - Part III.—The House of Representatives:
  - Part IV.—Both Houses of the Parliament:
  - Part V.—Powers of the Parliament:
- Chapter II.—The Executive Government:
- Chapter III.—The Judicature:
- Chapter IV.—Finance and Trade:
- Chapter V.—The States:
- Chapter VI.—New States:
- Chapter VII.—Miscellaneous:
- Chapter VIII.—Alteration of the Constitution.
- The Schedule.

### CHAPTER I.—THE PARLIAMENT.

#### PART I.—GENERAL.

1. The legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called “The Parliament”, or “The Parliament of the Commonwealth”.

2. A Governor-General appointed by the Queen shall be Her Majesty’s representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen’s pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

3. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office.

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

#### PART II.—THE SENATE.

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.



Until the Parliament otherwise provides there shall be six senators for each Original State.\* The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws determining the times and places of elections of senators for the State.

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in numbers as practicable; and the places of the senators of the first class shall become vacant at the expiration of [the third year] *three years*,† and the places of those of the second class at the expiration of [the sixth year] *six years*,† from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made [in the year at the expiration of which] *within one year before*† the places are to become vacant.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of [January] *July*† following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of [January] *July*† preceding the day of his election.

14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.

15. If the place of a senator becomes vacant before the expiration of his term of service, the House of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.

16. The qualifications of a senator shall be the same as those of a member of the House of Representatives.

\* The Parliament has otherwise provided, by means of the *Representation Act* 1948, that the number of senators shall be ten for each State from the first meeting of Parliament after the first dissolution of the House of Representatives occurring after the commencement of the Act (18 May 1948).

† As amended by Section 2 of the *Constitution Alteration (Senate Elections)* 1906. The words in square brackets have been repealed; amendments are shown in italics.

17. The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

18. Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

19. A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

20. The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

21. Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth, the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

22. Until the Parliament otherwise provides, the presence of at least one third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

23. Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

### PART III.—THE HOUSE OF REPRESENTATIVES.

24. The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner:—

(i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators;

(ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But notwithstanding anything in this section, five members at least shall be chosen in each Original State.

25. For the purpose of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows:—

New South Wales . . . .	twenty-three;	South Australia . . . .	six;
Victoria . . . . .	twenty;	Tasmania . . . . .	five;
Queensland . . . . .	eight;		

Provided that if Western Australia is an Original State, the numbers shall be as follows:—

New South Wales . . . .	twenty-six;	South Australia . . . .	seven;
Victoria . . . . .	twenty-three;	Western Australia . . . .	five;
Queensland . . . . .	nine;	Tasmania . . . . .	five.

27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provision, each State shall be one electorate.

30. Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State; but in the choosing of members each elector shall vote only once.\*

31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows:—

- (i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen:
- (ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom, or of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.†

35. The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

37. A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

#### PART IV.—BOTH HOUSES OF THE PARLIAMENT.

41. No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State, shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

\* The Parliament has otherwise provided, by means of the *Commonwealth Electoral Act 1918–1965*, Sections 39 and 39A (repealing an earlier provision made by the *Commonwealth Franchise Act 1902*). For present qualifications see Chapter 3, General Government.

† The Parliament has otherwise provided, by means of the *Commonwealth Electoral Act 1918–1965*, Section 69. For present qualifications see Chapter 3, General Government.



42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorized by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

44. Any person who—

- (i) Is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power: or
- (ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer: or
- (iii) Is an undischarged bankrupt or insolvent: or
- (iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth: or
- (v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons:

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section (iv) does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half-pay, or a pension by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

45. If a senator or member of the House of Representatives—

- (i) Becomes subject to any of the disabilities mentioned in the last preceding section: or
- (ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors: or
- (iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State:

his place shall thereupon become vacant.

46. Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

47. Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House shall be determined by the House in which the question arises.

48. Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.\*

49. The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

50. Each House of the Parliament may make rules and orders with respect to—

- (i) The mode in which its powers, privileges, and immunities may be exercised and upheld;
- (ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

\* The Parliamentary allowance has been varied from time to time. For current allowances, see Chapter 3, General Government.

## PART V.—POWERS OF THE PARLIAMENT.\*

51. The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to:—

- (i) Trade and commerce with other countries, and among the States:
- (ii) Taxation; but so as not to discriminate between States or parts of States:
- (iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth:
- (iv) Borrowing money on the public credit of the Commonwealth:
- (v) Postal, telegraphic, telephonic, and other like services:
- (vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth:
- (vii) Lighthouses, lightships, beacons and buoys:
- (viii) Astronomical and meteorological observations:
- (ix) Quarantine:
- (x) Fisheries in Australian waters beyond territorial limits:
- (xi) Census and statistics:
- (xii) Currency, coinage, and legal tender:
- (xiii) Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money:
- (xiv) Insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned.
- (xv) Weights and measures:
- (xvi) Bills of exchange and promissory notes:
- (xvii) Bankruptcy and insolvency:
- (xviii) Copyrights, patents of inventions and designs, and trade marks:
- (xix) Naturalization and aliens:
- (xx) Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth:
- (xxi) Marriage:
- (xxii) Divorce and matrimonial causes; and in relation thereto, parental rights, and the custody and guardianship of infants:
- (xxiii) Invalid and old-age pensions:
- (xxiiiA) †*The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances:*
- (xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States:
- (xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States:
- (xxvi) The people of any race [other than the aboriginal race in any State]‡ for whom it is deemed necessary to make special laws:
- (xxvii) Immigration and emigration:
- (xxviii) The influx of criminals:
- (xxix) External affairs:
- (xxx) The relations of the Commonwealth with the islands of the Pacific.
- (xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws:
- (xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth:

\* Particulars of proposed laws which were submitted to referendums are referred to in Chapter 3, General Government, of this Year Book.

† Under Section 2 of the *Constitution Alteration (Social Services)* 1946, the Constitution was amended by the insertion of this paragraph.

‡ Under Section 2 of the *Constitution Alteration (Aboriginals)* 1967, the words in square brackets were omitted.

- (xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State:
- (xxxiv) Railway construction and extension in any State with the consent of that State:
- (xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State:
- (xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides:
- (xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law:
- (xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia:
- (xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.

52. The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth with respect to—

- (i) The seat of Government of the Commonwealth, and all places acquired by the Commonwealth for public purposes:
- (ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth:
- (iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.

53. Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed law so as to increase any proposed charge or burden on the people.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.

55. Laws imposing taxation shall deal only with the imposition of taxation, and any provision therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.

57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of expiry of the House of Representatives by effluxion of time.



If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

## CHAPTER II.—THE EXECUTIVE GOVERNMENT.

61. The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.\*

66. There shall be payable to the Queen, out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which, until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.\*

67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

\* The number of Ministers of State and the annual appropriation for their salaries have been varied from time to time. For current particulars, see Chapter 3, General Government.

68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth:—

Posts, telegraphs, and telephones:

Naval and military defence:

Lighthouses, lightships, beacons and buoys:

Quarantine.

But the departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

### CHAPTER III.—THE JUDICATURE.

71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.\*

72. The Justices of the High Court and of the other Courts created by the Parliament—

- (i) Shall be appointed by the Governor-General in Council:
- (ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity:
- (iii) Shall receive such remuneration as the Parliament may fix; but the remuneration shall not be diminished during their continuance in office.†

73. The High Court shall have jurisdiction, with such exceptions and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences—

- (i) Of any Justice or Justices exercising the original jurisdiction of the High Court:
- (ii) Of any other federal court, or court exercising federal jurisdiction; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council:
- (iii) Of the Inter-State Commission, but as to questions of law only:

and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

74. No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits inter se of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits inter se of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

\* The *Judiciary Act* 1903 provided for a Chief Justice and two other Justices, increased by subsequent amendments to six.

† The *Judiciary Act* 1903 provided for the payment of a salary of £3,500 (\$7,000) a year to the Chief Justice and of £3,000 (\$6,000) a year to each other Justice. These amounts have been varied from time to time.

75. In all matters—

- (i) Arising under any treaty:
- (ii) Affecting consuls or other representatives of other countries:
- (iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party:
- (iv) Between States, or between residents of different States, or between a State and a resident of another State:
- (v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth:

the High Court shall have original jurisdiction.

76. The Parliament may make laws conferring original jurisdiction on the High Court in any matter—

- (i) Arising under this Constitution, or involving its interpretation:
- (ii) Arising under any laws made by the Parliament:
- (iii) Of Admiralty and maritime jurisdiction:
- (iv) Relating to the same subject-matter claimed under the laws of different States.

77. With respect to any of the matters mentioned in the last two sections the Parliament may make laws—

- (i) Defining the jurisdiction of any federal court other than the High Court:
- (ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States:
- (iii) Investing any court of a State with federal jurisdiction.

78. The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

#### CHAPTER IV.—FINANCE AND TRADE.

81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof



to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

85. When any department of the public service of a State is transferred to the Commonwealth—

- (i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth; but, in the case of the departments controlling customs and excise bounties, for such time only as the Governor-General in Council may declare to be necessary:
- (ii) The Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth:
- (iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section; if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament:
- (iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

86. On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

87. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

88. Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

89. Until the imposition of uniform duties of customs—

- (i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.
- (ii) The Commonwealth shall debit to each State—
  - (a) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth;
  - (b) The proportion of the State, according to the number of its people, in the other expenditure of the Commonwealth.
- (iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

90. On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

91. Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.

92. On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which, whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

93. During the first five years after the imposition of uniform duties of customs, and thereafter until the Parliament otherwise provides—

(i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State:

(ii) Subject to the last sub-section, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

94. After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.

95. Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an Original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth; and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

96. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

97. Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned wherever the Colony, or the Government or an officer of the Colony is mentioned.

98. The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

99. The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

100. The Commonwealth shall not, by any law or regulation or trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

101. There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.

102. The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State; due regard

being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

103. The Members of the Inter-State Commission—

- (i) Shall be appointed by the Governor-General in Council;
- (ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity;
- (iii) Shall receive such remuneration as the Parliament may fix; but such remuneration shall not be diminished during their continuance in office.

104. Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

105. The Parliament may take over from the States their public debts [as existing at the establishment of the Commonwealth],\* or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof; and the States shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.

105A.†(1.) *The Commonwealth may make agreements with the States with respect to the public debts of the States, including—*

- (a) *the taking over of such debts by the Commonwealth;*
- (b) *the management of such debts;*
- (c) *the payment of interest and the provision and management of sinking funds in respect of such debts;*
- (d) *the consolidation, renewal, conversion, and redemption of such debts;*
- (e) *the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth; and*
- (f) *the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.*

(2.) *The Parliament may make laws for validating any such agreement made before the commencement of this section.*

(3.) *The Parliament may make laws for the carrying out by the parties thereto of any such agreement.*

(4.) *Any such agreement may be varied or rescinded by the parties thereto.*

(5.) *Every such agreement and any such variation thereof shall be binding upon the Commonwealth and the States parties thereto notwithstanding anything contained in this Constitution or the Constitution of the several States or in any law of the Parliament of the Commonwealth or of any State.*

(6.) *The powers conferred by this section shall not be construed as being limited in any way by the provisions of section one hundred and five of this Constitution.*

## CHAPTER V.—THE STATES.

106. The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

107. Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be.

\* Under Section 2 of the *Constitution Alteration (State Debts)* 1909, the words in square brackets were omitted.

† Under Section 2 of the *Constitution Alteration (State Debts)* 1928, the Constitution was amended by the insertion of this section.



108. Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State; and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

109. When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

110. The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

111. The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender, and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

112. After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

113. All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

114. A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

115. A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

116. The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

117. A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

118. Full faith and credit shall be given, throughout the Commonwealth, to the laws, the public Acts and records, and the judicial proceedings of every State.

119. The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

120. Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

#### CHAPTER VI.—NEW STATES.

121. The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

122. The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

123. The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

124. A new State may be formed by separation of territory from a State, but only with the consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.

## CHAPTER VII.—MISCELLANEOUS.

125. The seat of Government of the Commonwealth shall be determined by the Parliament and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the seat of Government.

126. The Queen may authorize the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

\*[127. In reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.]

## CHAPTER VIII.—ALTERATION OF THE CONSTITUTION.

128. This Constitution shall not be altered except in the following manner:—

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

## SCHEDULE.

## OATH.

I, *A.B.*, do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. SO HELP ME GOD!

## AFFIRMATION.

I, *A.B.*, do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law.

(NOTE. *The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.*)

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\* Under Section 3 of the *Constitution Alteration (Aboriginals)* 1967 the section in square brackets was repealed.

### The Royal Proclamation

The preceding Act received the Royal assent on 9 July 1900. This made it lawful to declare that the people of Australia should be united in a Federal Commonwealth. This proclamation, made on 17 September 1900, constituted the Commonwealth as from 1 January 1901; it read as follows.

#### BY THE QUEEN. A PROCLAMATION.

(Signed) VICTORIA R.

WHEREAS by an Act of Parliament passed in the Sixty-third and Sixty-fourth Years of Our Reign, intituled "An Act to constitute the Commonwealth of *Australia*," it is enacted that it shall be lawful for the Queen, with the advice of the Privy Council, to declare by Proclamation, that, on and after a day therein appointed, not being later than One year after the passing of this Act, the people of *New South Wales*, *Victoria*, *South Australia*, *Queensland* and *Tasmania*, and also, if Her Majesty is satisfied that the people of *Western Australia* have agreed thereto, of *Western Australia*, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia.

And whereas We are satisfied that the people of *Western Australia* have agreed thereto accordingly.

We therefore, by and with the advice of Our Privy Council, have thought fit to issue this Our Royal Proclamation, and We do hereby declare that on and after the First day of *January* One thousand nine hundred and one, the people of *New South Wales*, *Victoria*, *South Australia*, *Queensland*, *Tasmania*, and *Western Australia* shall be united in a Federal Commonwealth under the name of the Commonwealth of *Australia*.

Given at Our Court at *Balmoral* this Seventeenth day of *September*, in the Year of Our Lord One thousand nine hundred, and in the Sixty-fourth Year of Our Reign.

GOD SAVE THE QUEEN.

### The External Territories of Australia

#### Norfolk Island

In 1856 Norfolk Island was created a distinct and separate settlement under the jurisdiction of New South Wales. Later, in 1896, it was made a dependency under the Governor of that colony, and finally by the passage of the *Norfolk Island Act* 1913 it was accepted as a Territory of the Commonwealth of Australia. The island is situated in latitude 29° 3' 3" S., longitude 167° 57' 5" E., and comprises an area approximately 14 square miles.

#### Papua

Under the administration of the Commonwealth, but not included in it, is British New Guinea or Papua, finally annexed by the British Government in 1884. This Territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on 1 September 1906, under the authority of the *Papua Act* 1905. The area of Papua is about 86,100 square miles.

#### Trust Territory of New Guinea

In 1919 it was agreed by the Principal Allied and Associated Powers that a mandate should be conferred on Australia for the government of the former German territories and islands situated in latitude between the Equator and 8° S., and in longitude between 141° E. and 159° 25' E. The mandate was issued by the League of Nations on 17 December 1920. The Governor-General of the Commonwealth was authorised to accept the mandate by the *New Guinea Act* 1920, which also declared the area to be a Territory under the authority of the Commonwealth by the name of the Territory of New Guinea. The land area comprises about 92,160 square miles, and the administration under the mandate dated from 9 May 1921. New Guinea is now administered under a Trusteeship Agreement with the United Nations, approved on 13 December 1946.

#### Australian Antarctic Territory

In Imperial Order in Council of 7 February 1933 placed under Australian authority 'all the islands and territories other than Adelie Land which are situated south of the 60th degree of South Latitude and lying between the 160th degree of East Longitude and the 45th degree of East Longitude'.



The Order came into force with a proclamation issued by the Governor-General on 24 August 1936, after the passing of the *Australian Antarctic Territory Acceptance Act* 1933 by the Commonwealth Parliament. The boundaries of Adelie Land were definitely fixed by a French Decree of 1 April 1938 as latitude 60° S., longitude 136° E., and longitude 142° E.

#### **Heard and McDonald Islands**

Heard and McDonald Islands, about 2,500 miles south-west of Fremantle, were transferred from United Kingdom to Australian control as from 26 December 1947. Heard Island is approximately 27 miles long and 13 miles wide, and McDonald Islands, about 26 miles to the west of Heard Island, are small, rocky and precipitous.

#### **Cocos [Keeling] Islands**

*The Cocos (Keeling) Islands Act* 1955 provided for the acceptance of the Cocos Islands, in the Indian Ocean, as a Territory under the authority of the Commonwealth of Australia and was parallel to an Act of the United Kingdom Parliament transferring authority over the islands to the Commonwealth. Consequent on the passing of these Acts, Her Majesty, by Order in Council, specified 23 November 1955 as the date of transfer. From that date the islands came under Australian administration and an Official Representative of Australia was appointed to take charge of the local administration of the islands. Their area is about 5½ square miles, and they are situated in the Indian Ocean in latitude 12° 5' S. and longitude 96° 53' E.

#### **Christmas Island**

The *Christmas Island Act* 1958 provided for the acceptance of Christmas Island, in the Indian Ocean, as a Territory under the authority of the Commonwealth of Australia. Complementary legislation having been passed by the Parliament of the United Kingdom, the island was transferred to the Australian administration on 1 October 1958, and an Official Representative was appointed to administer the Territory. The area of the island is about 52 square miles and it is situated in the Indian Ocean in latitude 10° 25' 22" S. and longitude 105° 39' 59" E.

#### **Coral Sea Islands**

The Coral Sea Islands were declared to be a Territory of the Commonwealth by the *Coral Sea Islands Act* 1969. The scattered reefs and islands, often little more than sandbanks, spread over a sea area of 400,000 square miles with only a few square miles of actual land area, between the Great Barrier Reef and longitude 157° 10' E.



## CHAPTER 2

# PHYSICAL GEOGRAPHY AND CLIMATE

### General description of Australia

#### Geographical position

The Australian Commonwealth, which includes the island continent of Australia and the island of Tasmania, is situated in the Southern Hemisphere, and comprises an area of 2,967,909 square miles, the mainland alone containing 2,941,526 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes 113° 9' E. and 153° 39' E., while its northern and southern limits are the parallels of latitude 10° 41' S. and 43° 39' S., or, excluding Tasmania, 39° 8' S. On its north are the Timor and Arafura Seas and Torres Strait, on its south the Southern Ocean\*. The extreme points are Steep Point on the West, Cape Byron on the east, Cape York on the north, and South-East Cape or, if Tasmania be excluded, Wilson's Promontory, on the south. The difference in latitude between Cape York and Wilson's Promontory is 1,959 miles, and in longitude between Steep Point and Cape Byron 2,489 miles.

#### Tropical and temperate regions

Of the total area of Australia, nearly 39 per cent lies within the tropics. Taking the latitude of the Tropic of Capricorn as 23° 30' S., the areas within the tropical and temperate zones are approximately as follows.

**AREAS OF TROPICAL AND TEMPERATE REGIONS: STATES AND TERRITORIES**  
(Square miles)

<i>Area</i>	<i>N.S.W. (a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Total</i>
Within tropical zone .	..	..	360,642	..	364,000	..	422,980	1,147,622
„ temperate zone	310,372	87,884	306,358	380,070	611,920	26,383	97,300	1,820,287
Total area .	310,372	87,884	667,000	380,070	975,920	26,383	520,280	2,967,909

(a) Includes Australian Capital Territory (939 square miles).

Fifty-four per cent of Queensland lies within the tropical zone and 46 per cent in the temperate zone; 37 per cent of Western Australia is tropical and 63 per cent temperate; while 81 per cent of the Northern Territory is tropical and 19 per cent temperate. All the remaining States lie within the temperate zone.

#### Area of Australia compared with areas of other countries

The area of Australia is almost as great as that of the United States of America excluding Alaska, four-fifths of that of Canada, more than half as large again as Europe excluding the U.S.S.R., and about twenty-five times that of Great Britain and Ireland. The areas of Australia and of certain other countries are shown in the table on the following page. The areas shown are in the main obtained from the *Statistical Yearbook* 1971, published by the Statistical Office of the United Nations, and the countries have been arranged in accordance with the continental groups used therein.

\* The Southern Ocean is a local designation for the part of the Indian Ocean lying between the southern shores of Australia and Antarctica.



AREA OF AUSTRALIA AND OF OTHER COUNTRIES, *circa 1968*

(Source: United Nations Statistical Yearbook, 1971)

('000 square miles)

Country	Area	Country	Area
Continental divisions—		Africa— <i>continued</i>	
Europe(a)	1,903	Niger	489
Asia(a)	10,629	Angola	481
U.S.S.R. (Europe and Asia)	8,649	Mali	479
Africa	11,704	Ethiopia	472
North and Central America and West Indies	9,362	South Africa, Republic of	471
South America	6,889	Mauritania	398
Oceania	3,286	United Arab Republic	386
		Tanzania, United Republic of	363
		Nigeria	357
		Namibia	318
		Mozambique	302
		Zambia	291
		Somalia	246
		Central African Republic	241
		Madagascar	227
		Kenya	225
		Other	1,990
		<i>Total, Africa</i>	<i>11,704</i>
		North and Central America—	
		Canada	3,852
		United States of America(b)	3,615
		Greenland	840
		Mexico	762
		Nicaragua	50
		Cuba	44
		Honduras	43
		Other	155
		<i>Total, North and Central America</i>	<i>9,362</i>
		South America—	
		Brazil	3,286
		Argentina	1,072
		Peru	496
		Colombia (excluding Panama)	440
		Bolivia	424
		Venezuela	352
		Chile	292
		Paraguay	157
		Ecuador	109
		Other	260
		<i>Total, South America</i>	<i>6,889</i>
		Oceania—	
		Australia	2,968
		Papua	178
		New Guinea(c)	
		New Zealand	104
		Other	36
		<i>Total, Oceania</i>	<i>3,286</i>
		Total, World, excluding Arctic and Antarctic regions	
	52,420		
Europe(a)—			
France	211		
Spain (including possessions)	195		
Sweden	174		
Finland	130		
Norway	125		
Poland	121		
Italy	116		
Yugoslavia	99		
Germany, Federal Republic of	96		
United Kingdom	94		
Romania	92		
Other	451		
<i>Total, Europe(a)</i>	<i>1,903</i>		
Asia(a)—			
China, People's Republic of	3,692		
India	1,176		
Saudi Arabia	830		
Iran	636		
Mongolia	604		
Indonesia	576		
Pakistan	366		
Trucial Oman	301		
Turkey	301		
Burma	262		
Afghanistan	250		
Thailand	198		
Iraq	168		
Other	1,269		
<i>Total, Asia(a)</i>	<i>10,629</i>		
U.S.S.R.—			
<i>Total, U.S.S.R.</i>	<i>8,649</i>		
Africa—			
Sudan	967		
Algeria	920		
Congo, Democratic Republic of	906		
Libya	679		
Chad	496		

(a) Excludes U.S.S.R. shown below. Other Asia.

(b) Includes Hawaii.

(c) Western New Guinea (West Irian) is included in

## AREAS OF STATES AND TERRITORIES, AND STANDARD TIMES

State or Territory	Area	Percentage of total area	Standard times	
			Meridian selected	Ahead of G.M.T.(a)
	sq miles			hours
New South Wales . . . .	309,433	10.43	150° E.	10
Victoria . . . . .	87,884	2.96	150° E.	10
Queensland . . . . .	667,000	22.47	150° E.	10
South Australia . . . .	380,070	12.81	142° 30' E.	9½
Western Australia . . .	975,920	32.88	120° E.	8
Northern Territory . . .	520,280	17.53	142° 30' E.	9½
Australian Capital Territory .	939	0.03	150° E.	10
<i>Mainland</i> . . . . .	<i>2,941,526</i>	<i>99.11</i>	<i>..</i>	<i>..</i>
Tasmania . . . . .	26,383	0.89	150° E.	10
<b>Australia</b> . . . . .	<b>2,967,909</b>	<b>100.00</b>	<b>..</b>	<b>..</b>

(a) Greenwich Mean Time is one hour behind British Standard Time.

The coastline of Australia is approximately 12,000 miles long—New South Wales, 700 miles; Victoria, 700 miles; Queensland, 3,200 miles; South Australia, 1,500 miles; Western Australia, 4,000 miles; Northern Territory, 1,000 miles; Australian Capital Territory, Jervis Bay area included in New South Wales; Tasmania 900 miles. These measurements are broadly on a 'direct' basis, but even so they must be regarded as approximate only.

**Geographical features of Australia**

The following description is a broad summary of the main physical characteristics of the Australian continent.

A section through the Australian continent from east to west, at the point of its greatest breadth, shows first a narrow belt of coastal plain. This plain, extending north and south along the whole east coast, is well watered by rivers. It is of variable width, seldom more than sixty or seventy miles, and occasionally only a few miles, the average being roughly about forty to fifty miles. Bordering this plain is the Great Dividing Range, which extends from the North of Queensland to the south of New South Wales, and thence one branch sweeps westward towards the boundary of Victoria and South Australia, and the other, the main branch, terminates in Tasmania. This range, which rises, often abruptly, from the plain, frequently presents bold escarpments on its eastern face, but the descent on its western slopes is gradual, until, in the country to the north of Spencers Gulf, the plain is not above sea-level and occasionally even below it. Thence there is another almost imperceptible rise until the mountain ranges of Western Australia are reached, and beyond these lies another coastal plain. The mountains of Australia are relatively low, the highest peak, Mount Kosciusko, in New South Wales, being only about 7,300 feet. Three-quarters of the land-mass of Australia lies between the 600 and 1,500 feet contours in the form of a huge plateau, constituting the most distinctive feature of the Australian continent, to which the peculiarities of Australia's climate can probably be largely ascribed.

The rivers of Australia may be divided into two major classes, those of the coastal plains with moderate rates of fall and those of the central plains with very slight fall. Of the former not many are navigable for any distance from their mouths, and bars make many of them difficult of access or inaccessible from the sea.

The longest two rivers of the northern part of the east coast are the Burdekin and the Fitzroy in Queensland. The Hunter is the largest coastal river of New South Wales, and the Murray River, with its great tributary the Darling, drains part of Queensland, the major part of New South Wales, and a large part of Victoria, finally flowing into the arm of the sea known as Lake Alexandrina, on the eastern side of the South Australian coast. The total length of the Murray is about 1,600 miles, 400 being in South Australia and 1,200 constituting the boundary between New South Wales and Victoria. The total length of the Murray-Darling from the source of the Darling to the mouth of the Murray is about 2,300 miles. The rivers of the north-west coast of Australia (Western Australia), e.g. the Murchison, Gascoyne, Ashburton, Fortesque, De Grey, Fitzroy, Drysdale, and Ord are of considerable size. So also are those in the Northern Territory, e.g. the Victoria and Daly, and those

on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert, and Mitchell. The rivers of Tasmania have short and rapid courses, as might be expected from the configuration of the country.

The 'lakes' of Australia may be divided into three classes: true permanent lakes; lakes which, being very shallow, become mere morasses in dry seasons or even dry up, and finally present a cracked surface of salt and dry mud; and lakes which are really inlets of the ocean, opening out into a lake-like expanse. The second class is the only one which seems to demand special mention. These are a characteristic of the great central plain of Australia. Some of them, such as Lakes Torrens, Gairdner, Eyre, and Frome, are of considerable extent.

For further information on the geographical features of Australia earlier issues of the Year Book should be consulted. The list of special articles, etc., at the end of this volume indicates the nature of the information available and its position in the various issues.

## Weather and climate of Australia

This section has been prepared by the Director of the Commonwealth Bureau of Meteorology, and the various States and Territories have been arranged in the standard order adopted by that Bureau. The section concludes with a brief summary of the weather of 1972.

### Introduction

Australia extends from about latitude 10° S. to latitude 44° S., but owing largely to the moderating effects of the surrounding oceans and the absence of very pronounced and extensive mountain masses it is less subject to extremes of climate than are regions of similar size in other parts of the world. The average elevation of the land surface is low—probably close to 900 feet above the sea; while the maximum altitude is just above 7,300 feet. Latitude for latitude the Australian climate is generally more temperate than that of the other large land masses of the earth, although it varies considerably from the tropical to the alpine.

The Australian meteorological seasons are: Summer—December, January, February; Autumn—March, April, May; Winter—June, July, August; Spring—September, October, November.

The following general discussion of the climate of Australia is necessarily brief. However, extensive records of Australian climatic data are held and published in various forms by the Bureau of Meteorology. A programme of regional climatic survey has been in progress for some years, and a large number of studies have been published by the Bureau of Meteorology, by the Department of Minerals and Energy, and by State Development Authorities. The Bureau of Meteorology welcomes inquiries for climatic information, which may be made at its Central Office in Melbourne or through the Regional Offices which are situated in each of the State capital cities and in Canberra and Darwin. Reference may also be made to various bulletins and research papers mentioned in this text for more detailed information on particular topics.

### Precipitation

Precipitation of moisture from the atmosphere may take various forms depending chiefly on the thermal conditions existing at the time. Within the Australian region precipitation occurs chiefly as rain because of the generally mild temperatures, but may also occur as snow or hail. Broadly, the immediate physical cause of rainfall may be said to be the lifting of moist air with resultant cooling, condensation into cloud, and eventual precipitation of the heavy water droplets as rain. This process may be achieved by three different means each of which may be combined with either or both of the others:

- (a) Orographic lifting caused by winds blowing onto rising terrain;
- (b) Convective lifting resulting in the development of individual rain clouds of the cumulus or cumulonimbus type producing showers and thunderstorms;
- (c) lifting of a warm air mass as it rises over cooler air—known as a 'frontal' process.

*Annual Rainfall.* The median annual rainfall over Australia is shown in plate 2, page 30 while plate 3, page 31, shows the distribution in 1972. The median is the value equalled or exceeded by half of the occurrences, and usually gives a better indication of the rainfall most frequently occurring.

While Australia is a continent of comparatively low relief, the orographic processes in rain production are very marked in the chain of the Great Dividing Range bordering the whole east coast of the continent, in the ranges of the south-western corner of Western Australia, and in Tasmania. Thus on the east coast the higher rainfall areas lie between the ranges and the Pacific Ocean in the region of prevailing south-east wind circulation. In Tasmania and the south-west of Western Australia the region of high rainfall lies between the ranges and the ocean to the west, these areas lying in a region of predominantly westerly wind flow.



The north-western part of the continent and to some extent the whole region of the Northern Territory and inland north Queensland comes under the influence of the Australian-Asian monsoon. This results in high rainfalls in a summer wet season with the inflow of moist air from the north-west, and a winter dry season with predominantly south-east winds blowing across the dry regions of the interior and producing little rainfall. Tropical cyclones affect the waters adjacent to the north-east and north-west of Australia between December and April. Their frequency varies greatly from season to season, but on the average about three of these disturbances occur in the Coral Sea each season and about two in the eastern Indian Ocean adjacent to the west coast of the continent. When tropical cyclones move close to the tropical coast of the continent they cause very heavy rainfalls over the coastal regions. On occasions these cyclones move over the land and lose intensity, but many still continue to be accompanied by heavy rainfall along their path.

Southern Australia lies in the region of the mid-latitude westerlies for the winter half of the year and is subject to the rain-producing influences of the great depressions of the Southern Ocean and their associated frontal systems. The combined effects of these systems and the topography lead to high winter rainfalls in south-western and south-eastern Australia and in Tasmania, with the highest falls occurring on the windward side of the mountains. The rainfall generally decreases inland with distance from the coast, although the 300 mm isohyet reaches the shore of the Great Australian Bight and the north-western coast of Western Australia in regions which are of very flat relief and which, because of their position and the orientation of the coastline, are only rarely exposed to moist winds.

**AREA DISTRIBUTION OF AVERAGE ANNUAL RAINFALL: STATES AND TERRITORIES**  
(Per cent)

<i>Average annual rainfall</i>	<i>W.A.</i>	<i>N.T.</i>	<i>S.A.</i>	<i>Qld</i>	<i>N.S.W. (a)</i>	<i>Vic.</i>	<i>Tas.</i>	<i>Total</i>
Under 250 mm	58.0	24.7	82.8	13.0	19.7	Nil	Nil	39.0
250 mm and under 380 mm	22.4	32.4	9.4	14.4	23.5	22.4	Nil	20.6
380 " " " 510 "	6.8	9.7	4.5	19.7	17.5	15.2	0.7	11.2
510 " " " 635 "	3.7	6.6	2.2	18.8	14.2	17.9	11.0	9.0
635 " " " 760 "	3.7	9.3	0.8	11.6	9.1	18.0	11.4	7.2
760 " " " 1015 "	3.3	4.7	0.3	11.1	9.9	16.1	20.4	6.1
1015 mm and over	2.1	12.6	Nil	11.4	6.1	10.4	56.5	6.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Includes Australian Capital Territory.

The region with the highest annual rainfall is the east coast of Queensland between Port Douglas and Cardwell, where Tully has an annual average of 4,500 mm. A further very high rainfall region is the mountainous west coast of Tasmania, where Lake Margaret has the highest annual average of 3,700 mm. The area of lowest average annual rainfalls is that of some 180,000 square miles surrounding Lake Eyre in South Australia, where on the average only 100 to 150 mm are received annually. The lowest average over a long period of record is at Troudaninna—105 mm. Rain occurs very irregularly, averaging only about one or two days a month in this region.

Of all the continents (excluding Antarctica), Australia receives the least depth of rainfall and has the least run-off from its rivers into the oceans. Only in relatively small areas of the continent could the rainfall be described as abundant.

*Seasonal distribution of rainfall.* The average monthly distribution of rainfall in the various Australian rainfall districts is shown by the histograms of plate 4, page 32.

The following are the most marked features.

- (a) The clearly defined wet summer and dry winter of the monsoon region of northern Australia.
- (b) The more regular distribution of rainfall throughout the year in south-eastern Australia. In the region to the south and west of the Great Dividing Range a less pronounced maximum of rainfall is noticeable in the winter or early spring. On the Gippsland (eastern Victoria) coast the rainfall is fairly evenly distributed throughout the year, but further along the east coast of the continent the rainfall minimum in late winter and early spring begins to appear and becomes more marked as the tropical regions are approached.
- (c) The marked rainfall maximum in the south-western districts of Western Australia in winter—the period of the most active southern depressions and frontal systems in this region.

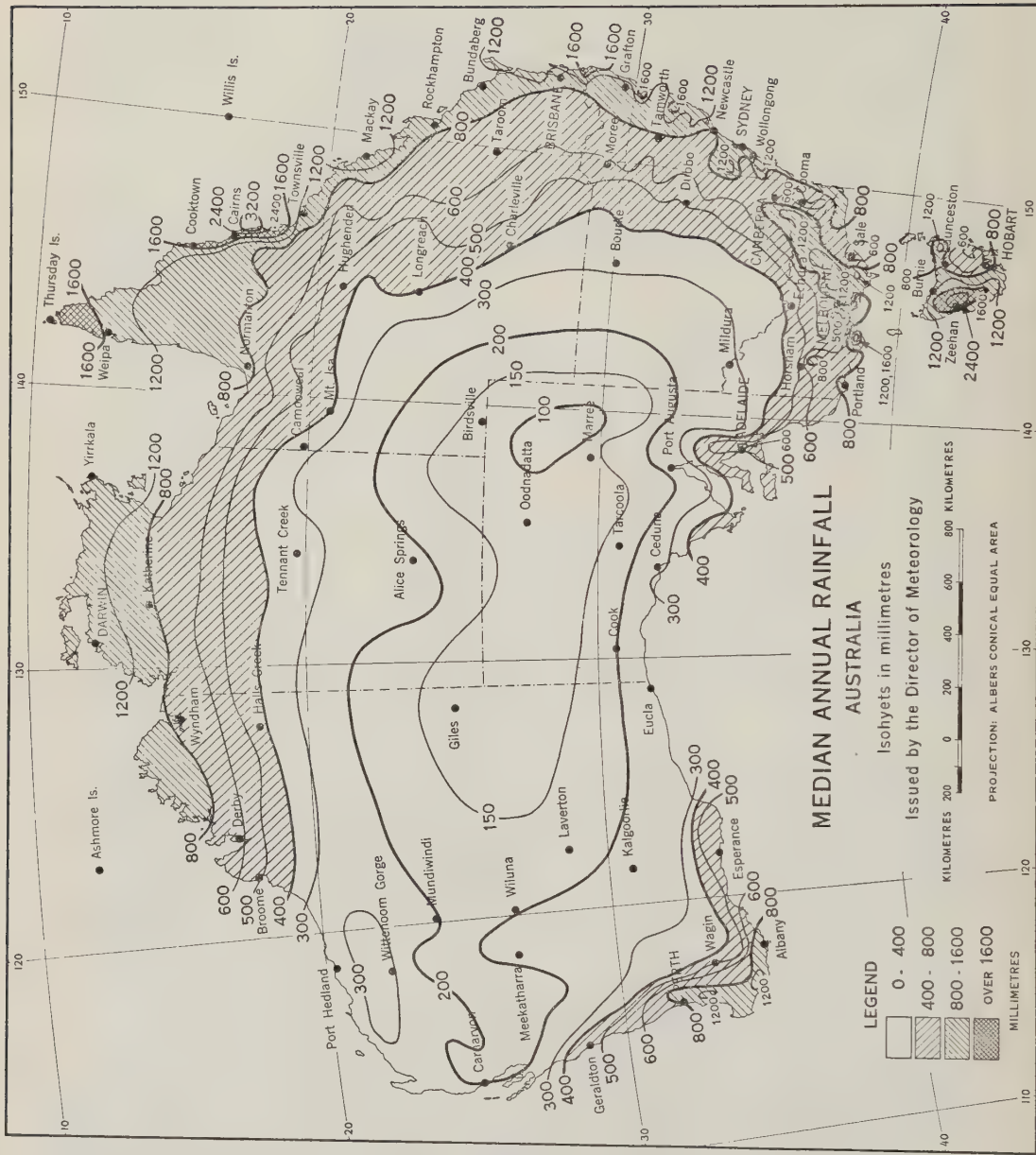


PLATE 2

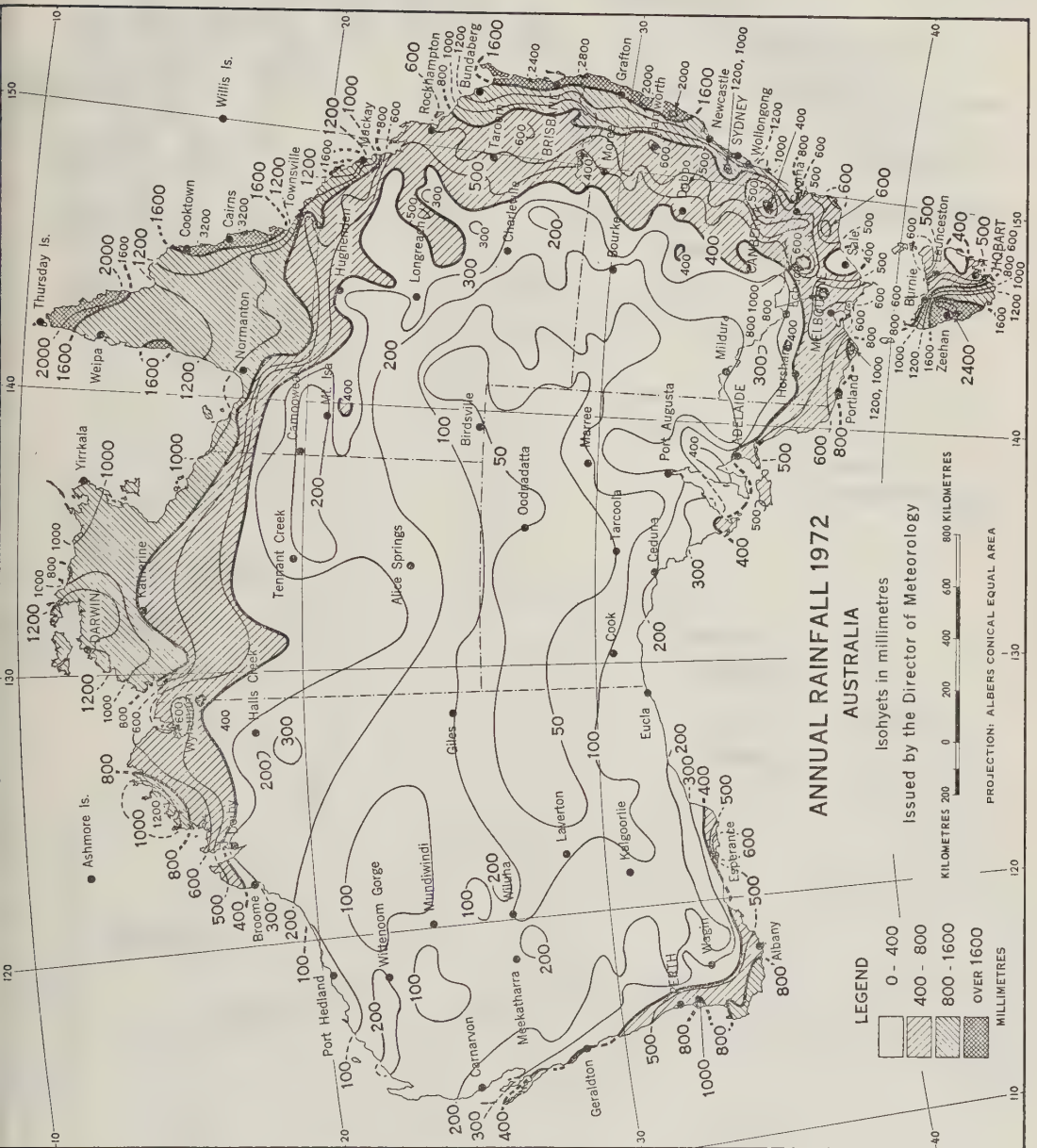


PLATE 3



# REFERENCE TO DISTRICTS

## WESTERN AUSTRALIA

- 1 North Kimberley
- 2 East Kimberley
- 3 West Kimberley
- 4 Pilbara
- 5 West Gascoyne
- 6 East Gascoyne
- 7 A. Macdonald
- 8 A. Macdonald
- 9 A. Macdonald
- 10 A. Macdonald
- 11 A. Macdonald
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- 45 A. Macdonald

## NORTHERN TERRITORY

- 1 Northern Territory
- 2 Northern Territory
- 3 Northern Territory
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## SOUTH AUSTRALIA

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## QUEENSLAND

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## TASMANIA

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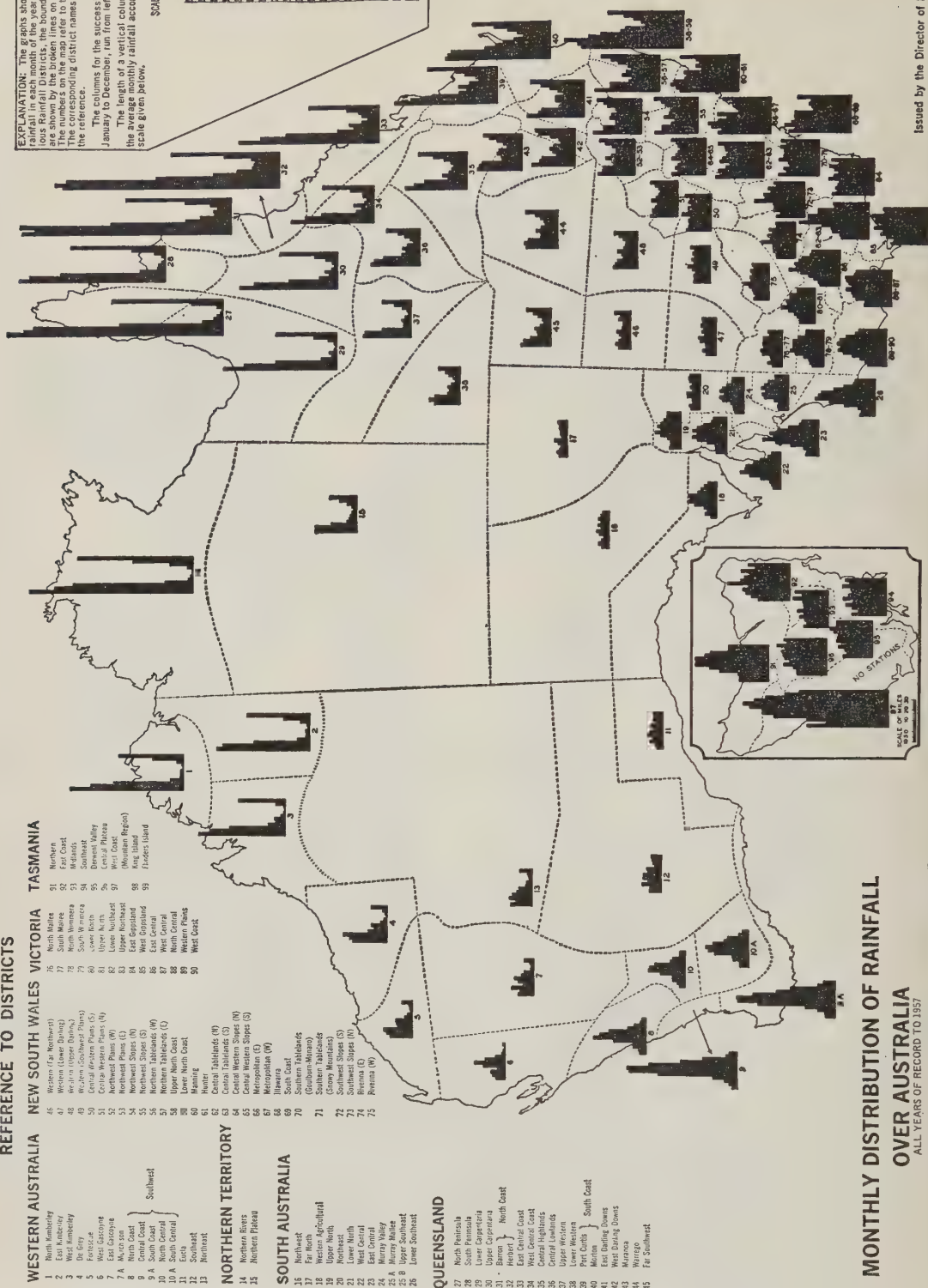
**EXPLANATION:** The graphs show the average rainfall in each month of the year in the various Rainfall Districts. The boundaries of which are shown by the broken lines on the map. The corresponding district names are given in the reference.

The columns for the successive months, January to December, run from left to right. The length of a vertical column represents the average rainfall according to the scale given below.

**SCALE**

mm

38  
36  
34  
32  
30  
28  
26  
24  
22  
20  
18  
16  
14  
12  
10  
8  
6  
4  
2  
0



## MONTHLY DISTRIBUTION OF RAINFALL OVER AUSTRALIA

ALL YEARS OF RECORD TO 1957

Issued by the Director of Meteorology

For further information on monthly rainfalls reference may be made to the various Australian rainfall bulletins, to the Climatological Surveys of particular districts, and to the annual rain maps and books of normals (standard 30 year periods), all published by the Bureau of Meteorology.

*Variability of rainfall.* For most agricultural pursuits a more important criterion of the value of rainfall is its variability or reliability. The adequate description of rainfall variability over an extensive geographical area is a matter of some difficulty. Probably the best available measures are to be found in the tables which have been calculated for a number of individual stations in some of the Climatological Survey districts. These tables show the percentage chances of receiving specified amounts of rainfall in monthly seasonal or annual time spans. Statistical indexes of rainfall variation based on a number of different techniques have been used to produce maps which show the main features of the variability of annual rainfall over Australia.

In general it may be stated that the regions of most reliable rainfall are the south-west of Western Australia, western Tasmania, and western and southern Victoria south of the divide. These areas have one of the most reliable rainfalls in the world. Elsewhere in Australia the degree of variability, in general, increases inland, but the region of the highest variability for low average annual rainfalls extends across the central part of the continent from south-western Queensland to the central coast of Western Australia. Some outstanding examples of the numerous instances of high rainfall variability throughout Australia are given below.

At Onslow (Western Australia) annual totals vary from 14 mm to 1,073 mm, and in the four consecutive years 1921 to 1924 the annual totals were 565, 69, 681, and 55 mm respectively. At Whim Creek, where 747 mm have been recorded in a single day, only 4 mm were received in the whole of 1924. Great variability can also occur in the heavy rainfall areas, e.g. at Tully the annual rainfalls have varied from 7,909 mm in 1950 to 2,487 mm in 1943.

The following table of annual rainfall for the Australian capital cities for the past thirty years indicates the variation in rainfall at these sites.

RAINFALL: AUSTRALIAN CAPITAL CITIES, 1943 TO 1972

Year	Perth		Adelaide		Brisbane		Sydney		Canberra(a)		Melbourne		Hobart	
	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days
	mm		mm		mm		mm		mm		mm		mm	
1943 . . . . .	799	117	453	135	1,287	126	1,289	136	580	141	478	150	529	149
1944 . . . . .	696	123	435	114	707	100	788	115	304	82	542	143	666	151
1945 . . . . .	1,338	137	453	105	1,223	130	1,180	136	604	92	488	152	430	157
1946 . . . . .	1,053	122	574	135	982	83	916	111	521	102	757	177	1,002	193
1947 . . . . .	1,103	137	556	146	1,532	146	1,053	137	668	121	774	163	981	181
1948 . . . . .	883	126	540	122	1,055	106	986	131	800	104	533	155	595	178
1949 . . . . .	690	126	463	119	1,198	121	1,683	149	646	115	798	163	580	157
1950 . . . . .	820	122	408	91	1,624	152	2,200	183	1,061	124	665	147	489	131
1951 . . . . .	867	127	646	135	861	87	1,350	143	482	95	758	155	624	163
1952 . . . . .	998	123	508	128	851	122	1,503	130	965	143	874	177	771	165
1953 . . . . .	943	119	508	121	1,107	101	1,038	110	493	110	721	148	713	162
1954 . . . . .	712	112	425	109	1,559	142	1,049	134	457	80	852	139	691	143
1955 . . . . .	1,182	138	624	134	1,280	136	1,846	160	735	128	780	160	567	168
1956 . . . . .	949	107	692	154	1,503	120	1,710	155	886	159	786	188	930	175
1957 . . . . .	848	117	424	110	523	80	689	110	340	78	525	146	728	129
1958 . . . . .	815	107	446	121	1,184	115	1,503	144	597	106	685	155	928	166
1959 . . . . .	615	114	288	88	1,164	146	1,516	164	891	106	656	131	490	136
1960 . . . . .	717	112	586	129	699	103	1,296	152	812	128	851	162	745	140
1961 . . . . .	820	133	379	122	1,076	134	1,450	161	773	109	560	129	458	156
1962 . . . . .	730	123	456	125	1,051	131	1,140	137	653	122	586	140	645	161
1963 . . . . .	994	140	621	118	1,247	134	2,035	169	618	126	738	149	394	129
1964 . . . . .	975	127	556	135	1,224	112	1,100	99	642	106	706	166	713	166
1965 . . . . .	1,041	128	339	111	1,042	113	915	118	399	87	590	122	533	158
1966 . . . . .	773	116	495	123	1,113	111	1,240	130	691	117	681	156	699	145
1967 . . . . .	1,048	104	257	89	1,798	137	1,341	141	352	72	332	106	488	130
1968 . . . . .	930	136	653	141	851	93	624	113	515	103	532	141	473	152
1969 . . . . .	574	87	525	112	1,045	115	1,446	140	758	121	625	137	720	156
1970 . . . . .	908	127	483	149	1,440	118	1,103	127	721	121	803	153	782	157
1971 . . . . .	799	124	672	147	1,373	124	1,108	141	456	116	779	164	752	165
1972 . . . . .	611	102	446	106	1,888	121	1,280	167	394	95	566	123	451	135
Average . . . . .	874	121	497	119	1,183	119	1,279	138	630	110	667	150	651	155

(a) Fairbairn Aerodrome.

Prolonged dry spells are fairly common in much of Australia, particularly in inland areas. A discussion of droughts in Australia may be found in Gibbs W. J. and Maher J. V. *Rainfall Deciles as Drought Indicators*, Bureau of Meteorology Bulletin No. 48 (1967). A shorter account of droughts in Australia will be found in a special article in Year Book No. 45, pages 51–6. A more recent account is included with Chapter 22—Water Conservation and Irrigation in Year Book No. 54 of 1968.

*Rainfall and vegetation.* In general, the three main climatic zones of the continent exert a particular controlling influence on the general vegetation. These are the northern third of the continent where rainfall is almost always restricted to the warmer months of the year, the southern third where rainfall is predominantly a winter and spring event, and a transitional zone which experiences rainfall from both sources, although in greatly reduced quantity over the interior, which is subject to frequent drought.

The length of the growing season, or conversely the extent of dry periods during the year, decides the type of vegetation which establishes in a region. The climatic influence on vegetative response is primarily through soil moisture and temperature. Thus in colder south-eastern areas the growing season is mainly temperature dependent, but elsewhere the availability of soil moisture is the prime factor. All rainfall is not equally effective in increasing the soil moisture, its availability from the soil storage to plants depending on the extent of surface run-off, seepage beyond the root zone, and loss by surface evaporation. Furthermore the effectiveness of available soil moisture depends on the evaporative demand of the local climate; for example, an inch of stored moisture may maintain vigorous plant growth for twice as long in Tasmania as in the warmer, drier atmosphere of inland New South Wales. Thus it is not a sound practice to assess the agricultural potential of different areas simply by reference to average rainfall.

Generally speaking, the length of the growing season exceeds nine months over the far south-west of Western Australia and in all eastern coastal districts from Cape York Peninsula to western Victoria, and within this region humid and semi-humid plant formation thrive. Soil types, of course, also play a part in the distribution of vegetation, but they too are, to a considerable extent, the result of climate and weather.

The climate of Arnhem Land (Northern Territory) is such that there is a considerable surplus of moisture for about five months of the warm season, followed regularly by a virtual drought which frequently reaches severe intensity, and this special combination of meteorological conditions results in annual and perennial vegetation adapted to this cycle.

Over the interior the position is more complex because of the lower levels of the rainfall, its greater variability, and the high evaporative power of the drier, warmer atmosphere. In this vast section of the continent the climatic demands are so severe that the vegetative formations of the moisture zones (i.e. the mesophytes, requiring about five months or longer growing season) are unable to exist. Thus a plant species adapted to these very dry and variable conditions (xerophytes), e.g. spinifex, salt bush, blue bush, and stunted eucalypts, capable of maintaining a cattle population, predominates over the arid interior.

The arid and semi-arid lands of Western Australia and inland New South Wales which border the desert carry the majority of the sheep in these States. In New South Wales the most important vegetative formations in these areas are savannah (treeless plains), savannah woodland, mulga scrub, and mallee scrub. In Western Australia sclerophyllous grass steppe and mulga scrub border the deserts and are succeeded to the south by zones of mallee scrub and mallee heath.

*Rainfall intensity.* The study of extremely high rainfall intensities is important in the investigation of the flow characteristics of river systems, and flood prevention measures, the design of irrigation works, and hydro-electric schemes. The highest rainfalls recorded in a period of twenty-four hours up to 1968 for each State and Territory were: Western Australia, Whim Creek, 747 mm, 3 April 1898; Northern Territory, Roper Valley, 545 mm, 15 April 1963; South Australia, Ardrossan, 206 mm, 18 February 1946; Queensland, Croyhamhurst, 907 mm, 3 February 1983; New South Wales, Dorriggo, 636 mm, 24 June 1950; Australian Capital Territory, Jervis Bay, 182 mm, 28 April 1963; Victoria, Balook, 275 mm, 18 February 1951; and Tasmania, Mathinna, 337 mm, 5 April 1929. Most of the very high intensities have occurred in the coastal strip of Queensland, where the combination of a tropical cyclone moving close to the mountainous terrain provides ideal conditions for spectacular falls. For other very heavy falls at various localities reference may be made to Year Books No. 14, pages 60–4, No. 22, pages 46–8, No. 29, pages 43, 44 and 51, and No. 53, pages 32–4.

*Snow and hail.* For varying periods from late autumn to early spring snow usually covers the ground to a great extent on the Australian Alps above a level of about 4,500 to 5,000 feet, where in both New South Wales and Victoria ski-ing resorts operate throughout the season.



In Tasmania also the highlands are frequently covered above the 3,500 feet level for extended periods of the winter. There are, however, some years when snowfalls are much lighter than normal and even fail completely. Light snow has been known to fall occasionally as far north as the New England plateau in New South Wales (latitude 31° S.), and in exceptional seasons much of the dividing range from Victoria to Toowoomba (Queensland) has been covered above a level of about 4,000 feet. In ravines around Mount Kosciusko small areas of snow may persist throughout the summer after a heavy winter fall. This winter snowfall of south-eastern Australia is important in aiding the reliable flow of many streams which are utilised in the hydro-electric schemes of the Snowy Mountains, northern Victoria, and Tasmania. Snowfall at low terrain elevations occurs from time to time, particularly in Tasmania and Victoria, but falls are usually light and rarely lie more than a few days.

Hail is most frequent in winter and spring along the south-eastern coastal region of the continent and in Tasmania, where it is usually of a relatively small size. Summer storms, however, which are quite frequent, particularly in the highland plateau regions of eastern Australia, often produce stones of large size and of destructive intensity. Very large stones capable of piercing light gauge galvanised iron are reported from time to time, and damage to fruit crops in southern and eastern Australia from large hail stones is quite frequent.

*Floods.* In general, flooding in Australia is most pronounced on the shorter streams flowing from the Great Dividing Range into the Pacific Ocean along the seaboard of Queensland and New South Wales. These floods are particularly destructive on the more densely populated coast of New South Wales. The chief rivers in this area are the Tweed, Richmond, Clarence, McLeay, Nepean, Hawkesbury, Hunter, and Shoalhaven, all of which experience quite frequent and considerable flooding. These floods occur chiefly in summer but may occur at any time of the year.

The great Fitzroy and Burdekin river systems in Queensland are also subject to floods during the summer wet season, while much of the heavy monsoon rain in northern Queensland flows southward through the normally dry channels of the network of rivers draining into Lake Eyre. This water may cause extensive floods over a vast area, but it is soon lost by seepage and evaporation and rarely reaches the lake in any quantity. The Condamine and other tributaries of the Darling also carry considerable volumes of water south through western New South Wales to the Murray, and flooding along their courses occurs from time to time.

Flooding also occurs from time to time, usually in autumn, winter, and spring, in the Murray-Murrumbidgee system of New South Wales and Victoria and on the smaller coastal streams of southern Victoria. In Tasmania, flooding of the north coast streams, particularly the South Esk system, is common in the same seasons. In South Australia some flooding has occurred in the lower reaches of the Murray owing to rainfall as far away as Queensland and south-eastern New South Wales. In the north of Western Australia and the Northern Territory, flooding of the coastal streams occurs frequently in summer but is not of such economic importance as the flooding of the eastern coastal streams of the continent, where many localities are more vulnerable to damage.

### Temperature

Conditions vary greatly for a particular individual even in a fixed location, so that it is difficult to describe general comfort variability uniquely throughout a region as varied climatically as Australia. A number of indexes which attempt to incorporate some of the factors concerned\* have been used experimentally from time to time, and further research continues on this very difficult problem. Generally speaking, there is an increase in discomfort northwards within the tropical regions of Australia in summer, owing to the heat and high absolute humidity which reached a maximum in the extreme north of the continent. Such conditions are, however, ameliorated to a large extent in highland areas such as the Atherton Tableland in Queensland. No part of Australia is uncomfortably hot in winter, and only in a small area of the Australian Alps and highland Tasmania does bodily strain due to cold exist in winter. The history of the settlement of the northern regions of Queensland and the Northern Territory indicates that with accelerating development of studies and experience in the arrangement of living and working accommodation, clothing, and general way of life, the effects of extremes of climate can be minimised.

For some further discussion of the problems of temperature and comfort conditions reference may be made to Ashton, H. T., *Meteorological Data for Air Conditioning in Australia*, Bureau of Meteorology Bulletin No. 47 (1964).

*Average seasonal temperature distribution.* Plates 5 to 8, pages 37–8, show the normal daily maximum and minimum temperatures for January and July, which may be taken as indicative respectively of the summer and winter seasons in Australia. Further detailed temperature data are presented on pages 48–57 for the capital cities and more important country towns of the Commonwealth.

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\* See Year Book No. 53, page 35.

On the basis of average annual mean temperatures, and latitude for latitude, Australia is somewhat cooler than the other land masses of the southern hemisphere and considerably cooler than the same latitudes in the large continental areas of the northern hemisphere. This is due to the insular nature of Australia and the stronger general circulation of the atmosphere in the southern hemisphere resulting in the transport of higher latitude (cooler) air into the subtropical regions.

July is the month with the lowest mean temperature in all parts of the continent, while the month with the highest mean temperature varies from February in Tasmania and southern Victoria to December in the northern part of the continent and November in Darwin. The lateness of the month of highest average temperature in the extreme south of the continent is due in part to the effect of the Southern Ocean, where the sea surface temperature reaches its maximum in February. The cooler period of the late summer in the north is due largely to increased cloudiness associated with the inflow of north-west winds with the onset of the monsoon season.

In January average maximum temperatures exceed  $35^{\circ}\text{C}$  over a vast area of the interior of the continent. The hottest part of Australia is situated in the north of Western Australia around the Marble Bar and Nullagine area, where the daily maximum screen temperature during the summer frequently exceeds  $38^{\circ}\text{C}$  for weeks at a time.

The marked change of maximum temperature in summer with distance from the sea, in areas close to the coasts, particularly along the Great Australian Bight and the Indian Ocean coast of Western Australia is due to the penetration inland of the vigorous sea breezes which are initiated by the considerable temperature contrast between land and sea surface temperatures. The  $25^{\circ}\text{C}$  isotherm of January mean maximum temperature skirts the southern coast of the continent from south-western Western Australia to Gulf St Vincent.

In January the mean minimum temperatures in the tropics, except for some highland regions, exceed  $22^{\circ}\text{C}$ , with a gradual decrease southward to values of  $12^{\circ}\text{C}$  in Victoria and  $9^{\circ}\text{C}$  in Tasmania. Highland regions in the south have mean values of  $5^{\circ}\text{C}$  and lower. In July a more regular latitudinal distribution of mean maximum temperature is evident, only parts of the north of the continent having mean maxima higher than  $30^{\circ}\text{C}$ . Values lower than  $15^{\circ}\text{C}$  are general over the south-eastern part of the continent, with mean maxima falling below  $5^{\circ}\text{C}$  in small alpine areas. Average night minimum temperatures in July fall below  $5^{\circ}\text{C}$  in areas south of the tropics and away from the coast. Alpine regions again record the lowest temperatures with some areas experiencing means lower than  $-3^{\circ}\text{C}$ .

*Extreme variation and daily range.* Only at a few inland places in Australia does the absolute range of temperature (i.e. the range from the highest maximum to the lowest minimum) exceed  $55^{\circ}\text{C}$ . Generally it is in the range  $45^{\circ}\text{C}$  to  $50^{\circ}\text{C}$  in the inland areas and somewhat less on the coasts. The highest temperature recorded in Australia was  $53.1^{\circ}\text{C}$  at Cloncurry (Queensland) on 16 January 1889 and the lowest  $-22.2^{\circ}\text{C}$  at Charlotte Pass in the Southern Alps on 14 July 1945 and again on 22 August 1947. The world record maximum temperature is  $58^{\circ}\text{C}$  at Azizia (Tripoli) on 13 August 1922 and the world record minimum temperature  $-88^{\circ}\text{C}$  at Vostok on the Antarctic plateau on 24 August 1960.

*High temperature.* Heat waves with a number of successive days higher than  $38^{\circ}\text{C}$  are relatively common in many parts of Australia. With the exception of the north-western coast of Western Australia, however, most coastal areas do not usually experience more than a few days in succession of such conditions. The frequency of such conditions increases inland, and periods of up to twenty days have been recorded over most of the settled areas. This figure increases in western Queensland and north-western Western Australia to more than sixty days in places. The central part of the Northern Territory and the Marble Bar-Nullagine area of Western Australia have recorded the most prolonged heat waves for the Australian region. The longest consecutive period of daily maxima greater than  $38^{\circ}\text{C}$  was 160 consecutive days recorded in Marble Bar during the summer of 1923-24.

*Frosts.* Injury to the tissues of growing plants is not caused until the temperature has fallen considerably below the freezing point of water ( $0^{\circ}\text{C}$ ), and a ground frost is regarded as having occurred when the grass thermometer has fallen below  $-0.9^{\circ}\text{C}$ . However, as terrestrial minima are not recorded at all stations, it is usual for statistical purposes to regard the registration of a screen thermometer of  $2.2^{\circ}\text{C}$  as indicating a 'light' frost. A map showing frequency of days with screen minima higher than  $2.2^{\circ}\text{C}$  (i.e. the frost free period) is reproduced in plate 9, page 41. A 'heavy' frost is taken as a screen reading of less than  $0^{\circ}\text{C}$ . A 'black' frost occurs with a combination of low temperature and low humidity, and, although frost crystals are not observed on the ground, damage takes place to the plant cells by the freezing and expansion of the moisture they contain.



PLATES 5 and 6





PLATES 7 and 8

The frequency of frost depends largely on altitude, latitude, and proximity to the sea, and locally, to a very large extent, on even minor variations in contour of the land. The parts of Australia which are most subject to frost are the eastern highlands from north-eastern Victoria to the western Darling Downs in southern Queensland. Most stations in this region experience more than ten nights a month with readings of  $0^{\circ}\text{C}$  or under for three to five months of the year. On Tasmania's Central Plateau similar conditions occur for three to six months of the year. Heavy frosts are comparatively infrequent in Western Australia, except in parts of the south and south-west. In South Australia frosts are most frequent in the agricultural areas of the south-east.

Frosts may occur within a few miles of the coast over the whole continent except the Northern Territory and most of north Queensland. Regions in which frosts may occur at any time of the year comprise most of Tasmania, large areas of the tablelands of New South Wales, much of inland Victoria, particularly the north-east, and a small part in the extreme south-west of Western Australia. Over most of the interior of the continent, and on the highlands of Queensland as far north as the Atherton Plateau, frosts commence in April and end in September, but they are infrequent in these months. Minimum temperatures below  $0^{\circ}\text{C}$  are experienced in most of the sub-tropical interior in June and July.

For further details of frost conditions in Australia reference should be made to Foley, J. C., *Frost in the Australian Region*, Bureau of Meteorology Bulletin No. 32 (1945).

### Humidity and saturation deficit

The annual variation of vapour pressure\* for regions outside the tropics closely follows that of temperature. However, the mean relative humidity† in the temperate regions is generally highest in winter and lowest during the summer. In northern Australia the highest relative humidity occurs during the rainy summer season. The relative humidity variation during the day closely follows the diurnal variation of temperature, being highest with low temperatures and lowest with high temperatures. The relative humidity at 9 a.m. for Australian conditions may be considered as a close approximation to the mean for the whole day. In the tables for the capital cities, pages 48–55, the mean monthly vapour pressure and relative humidity for 9 a.m., together with the monthly extremes are listed. The order of the stations in descending values of mean annual vapour pressure at 9 a.m. is Darwin, Brisbane, Sydney, Perth, Melbourne, Adelaide, Canberra, and Hobart, while the annual mean of the 9 a.m. relative humidities diminishes in the order Darwin, Sydney, Canberra, Melbourne, Brisbane, Hobart, Perth, and Adelaide.

In January the mean saturation deficit‡ at the mean temperature for the month has a maximum value of over 20 mm in the central parts of Western Australia and in south-western Queensland. Gradual decreases occur towards the coast, where values close to the north, east, and south coastlines are around 5 mm. On the western coast values are somewhat higher, and a strong gradient exists in the saturation deficit in the narrow region bordering the Indian Ocean. In July the variation is less, with maxima of 10 mm in the dry north of the Northern Territory and Western Australia, slowly decreasing generally to the south, with values over most of the south-east and extreme south-west of the continent being less than 2 mm. Extremely low values (less than 0.5 mm) exist in July over the highlands of south-eastern Australia and Tasmania.

### Evaporation

In Australia the study of evaporation is of great importance, since in its drier regions water conservation must be practised by the use of tanks and dams. The magnitude of the economic loss by evaporation may be appreciated from plate 10, page 41, which shows that the yearly amount varies from 500 mm over the highland areas of central Tasmania to more than 3300 mm in the northern and north-western part of South Australia.

Over an area of some 70 per cent of the continent, comprising most inland districts and extending to the coast in the north-west of Western Australia and to the head of the Great Australian Bight, the rainfall does not exceed the evaporation loss in any month of the year. The central and north-western portion of the continent experience evaporation far in excess of their rainfall. Vegetation over these areas is characterised by acacia, scrub steppe, and arid scrub, while many areas are merely sand hills and stony desert. Over many of the drier areas, however, particularly in the inland areas of south-eastern Australia, the loss of rainfall by evaporation is made good to some extent by the development of irrigation schemes. Some of these schemes, such as those at the Murrumbidgee Irrigation Area in New South Wales and at Mildura in Victoria and Renmark in South Australia, have been very successful. The Snowy Mountains Hydro-electric Scheme has also resulted in the

\* Vapour pressure—the pressure exerted by the water vapour of the atmosphere. † Relative humidity—the ratio of the existing vapour pressure to the saturated vapour pressure at the existing temperature, expressed as a percentage.  
‡ Saturation deficit—the difference between the saturation vapour pressure and the actual vapour pressure. See Year Book No. 53, page 37 for further information.

large scale supply of water from the south-eastern highlands of Australia for use in the drier areas to the west of the ranges in New South Wales and Victoria. The future development of such schemes as these holds promise for the reclamation of many marginal areas in Australia, which because of low rainfall and high evaporation are at present of little economic value.

Since the loss by evaporation depends largely on the net radiation absorbed and consequently on the extent of the exposed area, tanks and dams so designed that the surface area shall be a minimum are advantageous. Further, the more protected they are from the direct rays of the sun and from winds the less will be the evaporation loss.

Further information on evaporation may be found in Hounam, C. E., *Evaporation in Australia*, Bureau of Meteorology Bulletin No. 44 (1961).

### Sunshine and cloud

The proportion of the sky covered by cloud is of considerable meteorological and climatological importance. A cloud cover inhibits both incoming and outgoing radiation and thus profoundly affects the temperature distribution and other factors at the earth's surface. Cloud amount is measured in eighths of the sky covered.

In Australia the seasonal changes in cloudiness correspond closely to that of rainfall. In the southern or more temperate parts of the continent, particularly in the coastal and low lying areas, the winter months are generally more cloudy than the summer. This is due to the formation of extensive areas of stratiform cloud and fog during the colder months, when the structure of the lower layers of the atmosphere favours the physical processes resulting in this type of cloud. A particularly strong annual periodicity exists in the monsoonal regions of northern Australia, where it is heavily clouded during the summer wet season and practically cloudless during the winter 'dry'. Cloudiness is higher near coasts and on the windward slopes of the mountains of eastern Australia and is least over the dry interior parts of the continent.

A close relationship exists between cloud amount and number of sunshine hours, and it is possible to estimate from cloud data the equivalent number of sunshine hours over a given period. These data can be incorporated with records of direct measurement of sunshine hours, and approximate distribution maps produced for Australia. Maps of the mean sunshine distribution for January and July are reproduced in plates 11 and 12, page 42 and indicate the main features of the variation over Australia in these months.

Except for Tasmania and a narrow fringe bordering the southern, eastern, and northern coasts, the greater part of the continent receives more than 3,000 hours of sunshine each year, and in Central Australia and the mid-western coast of Western Australia totals in excess of 3,500 hours occur. The extreme south coast receives in the main 2,000 to 2,500 hours annually, while the east coast regions of New South Wales and Queensland receive 2,500 to 3,000 hours. A minimum of less than 1,750 hours occurs on the west coast and highlands of Tasmania.

Mean amounts of cloud for each month at the capital cities are included in the tables on pages 48-55, as are the mean daily hours of sunshine. The latter figure is a good single measure of the relative climatic characteristics of the individual cities for different months of the year.

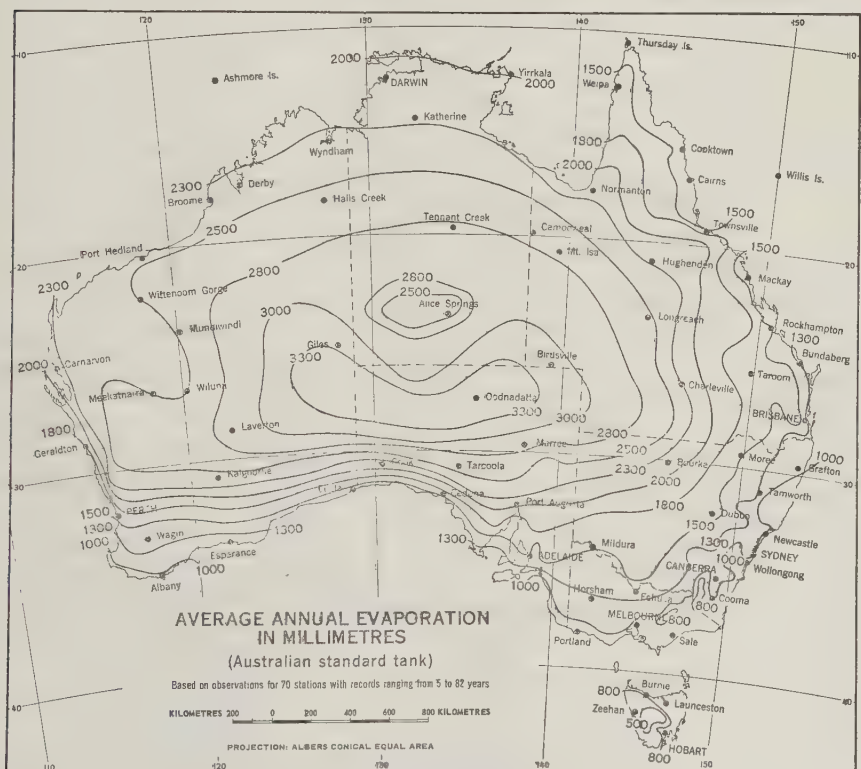
### Wind

Australia lies in those latitudes of the southern hemisphere where it is influenced largely by two wind systems:

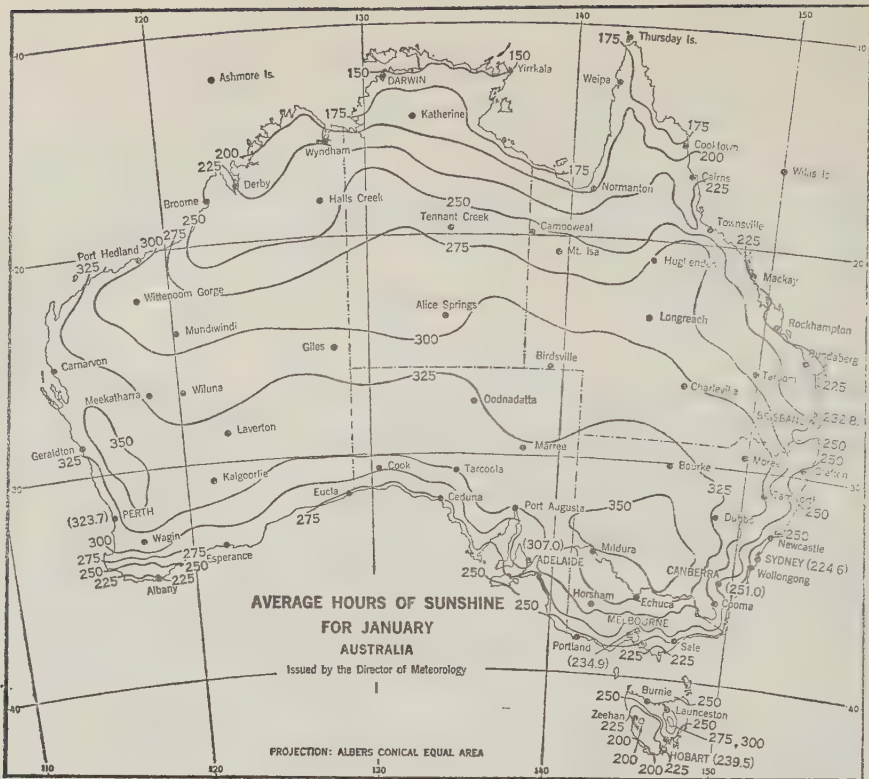
- (a) the south-east trade winds blowing on the equatorial side of the mid-latitude anticyclones: and
- (b) the westerlies south of the mid-latitude anticyclones in which successive low pressure systems move eastward over the Southern Ocean.

The only pronounced seasonal variations of atmospheric pressure in the middle and high latitudes of the southern hemisphere are related to the latitudinal shift in the axes of the sub-tropical high pressure systems and to the change in the tracks of the migratory anticyclones. The latter systems move generally from west to east in the Australian region between the semi-permanent oceanic anticyclones of the Indian and Pacific Oceans. The mean path of these systems lies over southern Australia during the summer but moves northwards during the winter with the thermal equator. The movement is only of a few degrees of latitude but it is of very great importance to the climate of the Australian





PLATES 9 and 10



PLATES 11 and 12

continent. During the summer months, when the anti-cyclones move on a more southerly track, the south-east trades affect the whole coast of eastern Australia north of around latitude  $30^{\circ}$  S., the westerlies retreating to higher latitudes, and conditions are more settled over southern Australia which then lies close to the axis of the anticyclones. In winter the anticyclones move further north, the trades affect only the northern parts of the continent, and southern Australia is exposed to the westerlies of the Southern Ocean.

In summer, with the retreat of the anticyclones to the south, the whole of northern and north-western Australia is exposed initially to light wind systems, and then during the period from December to April to the effects of the north-west monsoon. This process, which is associated with an inflow of north-west winds and intensive rains, is not as regular or persistent as the south-west monsoon of south-east Asia. However, it is a sufficiently regular feature of the climate of northern Australia to be designated as the north-west season, or, as it is best known in the area, 'the wet'. Its influence affects areas as far south as central Queensland, but southern Queensland and the area east of the Great Dividing Range are largely still under the influence of the south-east trades. Fringe or marginal areas on the southern limits of the monsoonal penetration over the continent have a shorter and more uncertain 'wet' season, which in some years fails to appear at all. With the northward advance of the anticyclones in autumn, the monsoon gives way again to the trades, and 'the dry' of northern and north-western Australia commences.

The general features of these wind patterns may be seen in the wind rose diagrams of plates 13 and 14, pages 44-5. It is important, however, to note the dynamic nature of the atmosphere, and that the continual growth, decay, and motion of the pressure systems result in a wide diversity of wind-flow types. Descriptions of wind conditions for particular geographical areas and seasons can thus be only of a very generalised kind. Further, local features can also be imposed on the overall wind pattern—channelling of winds due to topography (e.g. the high frequency of north-west winds in Hobart) and the marked summer sea breeze characteristics of most of the Australian coast, particularly near the Great Australian Bight as shown in the diagrams of 3 p.m. wind frequencies.

### Storms and tropical cyclones

In general there are two types of weather systems in Australia which produce very strong winds and heavy rainfalls over large areas of the continent:

- (a) the active depressions which move eastwards over the Southern Ocean; and
- (b) the tropical cyclones or hurricanes of north-eastern and north-western Australia.

During the winter the southern shores of the continent are subject to the deep depressions of the southern low pressure belt. They are felt most severely over the south-west of Western Australia, the south-east of South Australia, southern Victoria, and Tasmania, and may move inland in all these regions bringing strong winds and heavy rainfall. Further extensions of this type of system frequently develop close to the coast of New South Wales, often bringing severe weather to this region and to southern Queensland. These are generally known as 'east coast lows'.

The frontal systems (i.e. the narrow zones characterised by cloud and bad weather separating two air masses of different density) which are associated with these depressions vary widely in character. A common type in south-east Australia is a cold front located in a  $\Lambda$  shaped trough. Such a system usually brings very strong north to north-west winds in advance of the front with a very abrupt backing of the wind to colder west to south-westerly winds after the frontal passage. Such frontal passages are, in their most severe form, associated with thunderstorms and line squalls, heavy rain, and a change to cold winds and showers. These violent changes with the passage of a cold front and strong southerly winds frequently affect the New South Wales coast as far north as Newcastle during the winter, and are popularly known as 'southerly busters'.

The most extensive rains of inland Australia occur when moist tropical air which has moved inland is lifted by convergence ahead of a slow moving colder air mass moving from the Southern Ocean. The coast of Queensland, particularly the section from Cooktown to Mackay and the adjacent waters, is subject to visitations by tropical cyclones (the 'hurricanes' of the Caribbean and 'typhoons' of the China Sea). These destructive systems can affect this region from December to April, normally forming in the Coral Sea, moving south-west close to the coast and then passing away to the south-east into the Pacific. They may, however, cross the coast from time to time and bring torrential rain and violent winds (often more than 150 km/h) to the coastal regions.

Similar systems affect the north-west coast of Western Australia where they bear the local name of 'willy willies', a name which is, however, often used generally in Australia for minor local whirlwinds or dust devils. The season in this region generally lasts from November to April, the storms originating in the Timor or Arafura Seas travelling usually south-west and approaching the coast most commonly between latitudes  $20^{\circ}$  S. and  $22^{\circ}$  S. Thence the systems may move southwards following the coast,

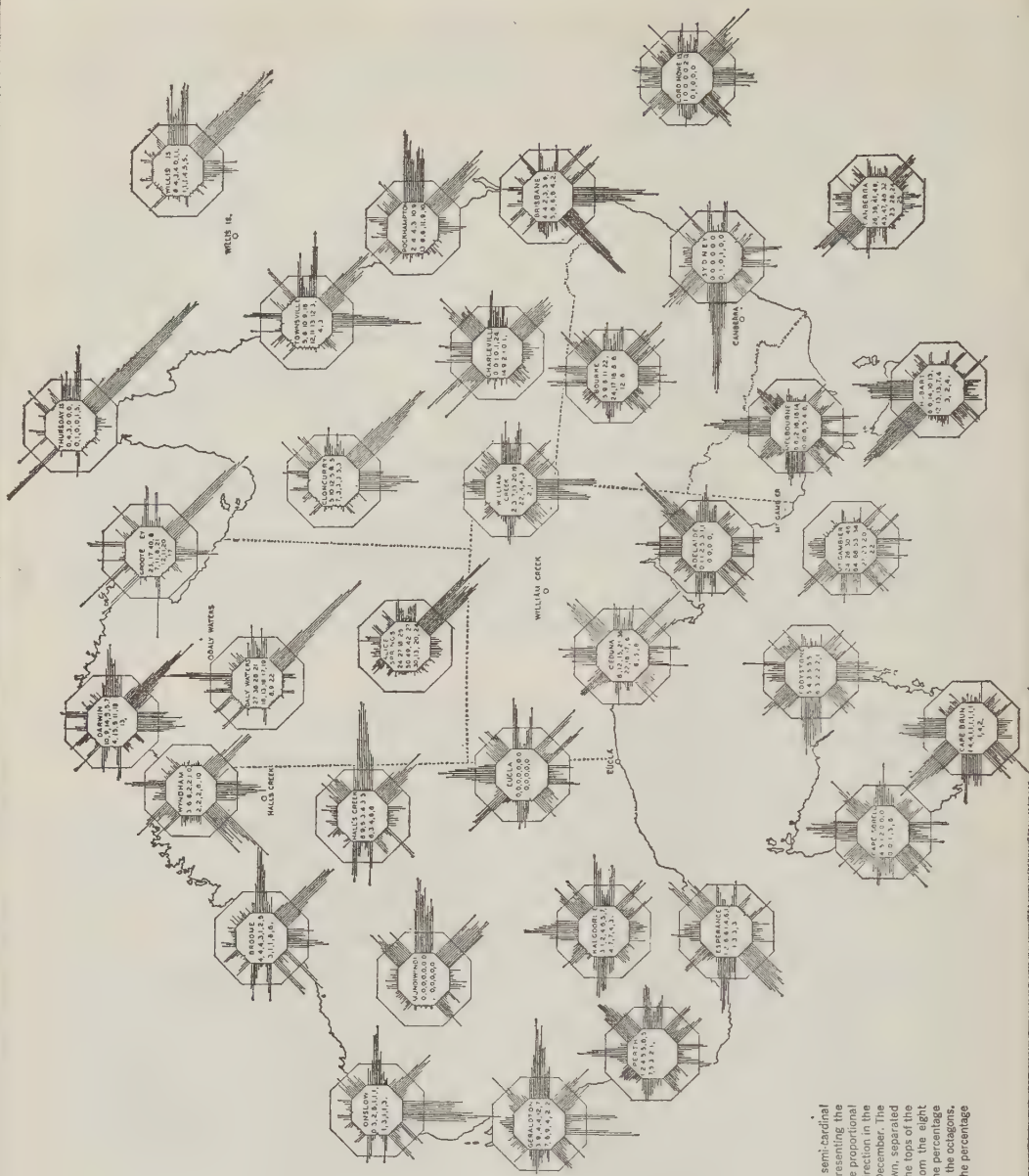


BUREAU OF METEOROLOGY

WIND ROSES

9 A.M.

SHOWING MONTHLY PERCENTAGE  
FREQUENCY DISTRIBUTION OF  
WIND DIRECTIONS TO EIGHT  
POINTS OF THE COMPASS



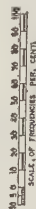
SCALE OF PERCENTAGES PER CENT

EXPLANATION

The sides of the octagons face toward the cardinal and semi-cardinal points. Projecting from each side are twelve columns representing the twelve months of the year, and the lengths of these columns are proportional to the percentage frequencies of the winds from the given direction in the successive months, working round clockwise from January to December. The scale is shown above, and the outer octagons have been drawn, separated from the inner octagons by a distance representing 12½%. The tops of the columns would all be on these outer octagons if winds from the eight directions were equally frequent and there were no calms. The percentage frequency of calms in the 12 months is shown by figures within the octagons. Since the frequency of calms is not shown for the months when the percentage of winds from that direction is practically zero.

# WIND ROSES

SHOWING MONTHLY PERCENTAGE  
FREQUENCY DISTRIBUTION OF  
WIND DIRECTIONS TO EIGHT  
POINTS OF THE COMPASS



The side of the octagons lies towards the cardinal and semi-cardinal points, projecting from each side are twelve columns representing the twelve months of the year, and the lengths of the columns are proportional to the percentage frequency of the winds from the given direction in the successive months, working outwards from January to December. The scale is shown above, and the outer octagon from January to December, separated from the inner octagon by a distance representing 121% and the tops of the columns would all be on these outer octagons if winds from all the directions were equally frequent and there were no calms. The percentage frequency of calms in the 12 months is shown by figures within the octagons. Small dashes within the inner octagons indicate months when the percentage of winds from that direction is practically zero.

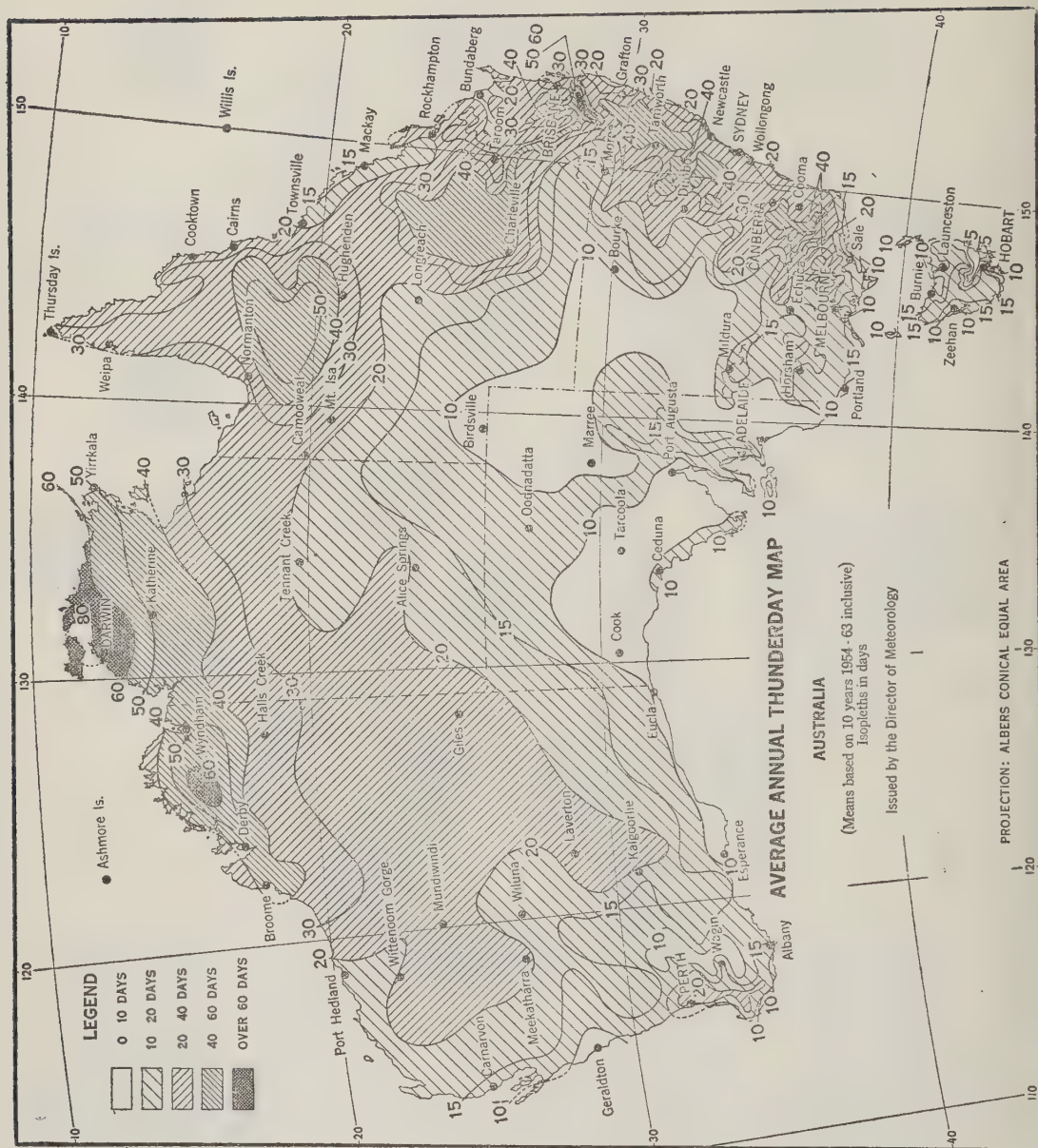


PLATE 15



or sometimes cross inland bringing high rainfalls to the otherwise dry interior of the continent. A further region which is affected somewhat less frequently by tropical cyclones is the coast of Arnhem Land in the Northern Territory and the waters and coasts of the Gulf of Carpentaria.

Tropical cyclones, in general, soon lose their intensity on crossing from sea to land, but, although the wind force rapidly abates, they are still capable of producing the heavy rainfall which leads to flooding of coastal rivers, damage to stock and property, and general disruption of transport.

Thunderstorms which bring local heavy rain and strong winds are common to most of Australia. They are also of particular importance because of the lightning damage which they cause to power transmission lines, and have been extensively studied for the purpose of siting electrical installations as far as possible in areas of low thunderstorm occurrence. Plate 15, page 46, shows the number of days annually on which thunder is heard, which is a better observational criterion than lightning observed. The region of maximum thunderstorm activity is the extreme north-west of the continent and the region south-east of the Gulf of Carpentaria. In the more settled areas maximum thunderstorm occurrence is in central western and south-eastern Queensland and the highland areas of New South Wales. The minimum number of storms occur over the interior of South Australia, western New South Wales, and eastern Tasmania.

#### Climatological tables

The averages and extremes for a number of elements which have been determined from long series of observations at the Australian capitals up to and including the year 1971 (data for Canberra up to 1972) are given in the following pages, together with more limited data for the larger country towns of the Commonwealth.

CLIMATOLOGICAL DATA: PERTH, WESTERN AUSTRALIA

(Lat. 31° 57' S., Long. 115° 52' E. Height above M.S.L. 15 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 22 metres)						Mean amt evapo- ration (mm)	No. days thun- der	Mean amt clouds		No. clear days
		Average km/h	Highest mean speed in one day (km/h)	High- est gust speed (km/h)	Prevailing direction		9 a.m., 3 p.m. (a)			9 p.m., (a)		
					9 a.m.	3 p.m.						
No. of years of obser- vations . . . . .	87	30(b)	71	56	30(b)	30(b)	73	75	30(b)	30(b)		
January . . . . .	1,012.6	17.5	42.3	27/98	E	SSW	264	0.9	2.3	14		
February . . . . .	1,013.0	17.2	34.6	6/08	ENE	SSW	223	0.7	2.5	13		
March . . . . .	1,015.2	16.2	34.6	6/13	E	SSW	195	0.7	2.8	12		
April . . . . .	1,017.9	13.7	50.7	25/00	ENE	SSW	119	0.8	3.4	9		
May . . . . .	1,017.9	13.5	43.9	29/32	NE	WSW	72	1.8	4.3	6		
June . . . . .	1,017.6	13.5	48.6	17/27	N	NW	48	1.8	4.7	5		
July . . . . .	1,018.9	14.2	53.9	20/26	NNE	W	47	1.4	4.5	5		
August . . . . .	1,018.8	15.1	51.3	15/03	N	WNW	63	1.2	4.5	6		
September . . . . .	1,018.4	15.1	45.9	11/05	ENE	SSW	91	0.7	3.9	8		
October . . . . .	1,017.0	16.1	43.0	6/16	SE	SW	140	0.7	3.8	8		
November . . . . .	1,015.5	17.2	41.4	18/97	E	SW	194	0.7	3.1	9		
December . . . . .	1,013.4	17.7	41.2	6/22	E	SSW	247	1.0	2.6	13		
Year { Totals . . . . .	1,016.3	15.6	..	..	..	..	1,703	12.4	..	108		
Year { Averages . . . . .	..	..	..	..	E	SSW	..	..	3.5	..		
Year { Extremes . . . . .	..	..	53.9	156	..	..	..	..	..	..		
20/7/26												

(a) Scale 0-8. (b) Standard thirty years normal (1911-1940).

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius)			Extreme air temperature (°Celsius)		Extreme temperature (°Celsius)		Mean daily hours sun-shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	75	75	75	75	75	63(a)	73	74
January	29.4	17.6	23.5	43.7	29/56	80.7	22/14	10.4
February	29.7	17.7	23.7	44.6	8/33	78.7	4/34	10.0
March	27.7	16.4	22.1	41.3	14/22	75.0	19/18	8.8
April	24.4	14.0	19.2	37.6	9/10	69.4	8/16	7.2
May	20.6	11.5	16.1	32.4	2/07	63.3	4/25	5.8
June	18.1	9.9	14.1	27.6	2/14	57.5	9/14	4.8
July	17.2	8.9	13.1	24.7	2/21	56.2	13/15	5.3
August	17.8	9.0	13.4	27.8	21/40	62.3	29/21	6.1
September	19.3	10.1	14.7	32.7	30/18	67.5	29/16	7.1
October	21.1	11.4	16.3	37.3	29/67	71.8	19/54	8.2
November	24.5	13.8	19.2	40.3	24/13	75.0	30/25	9.6
December	27.3	16.0	21.6	42.3	31/68	76.0	11/27	10.5
Year { Averages	23.1	13.0	18.1	..	..	..	..	7.8
Year { Extremes.	..	..	..	44.6	1.2	80.7	-3.9	..
				8/2/33	7/7/16	22/1/14	31/5/64	..

(a) Records discontinued 1963. (b) 8/1903 and 16/1967. (c) 8/1952 and 6/1956.

HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m.			Rainfall (millimetres)					Fog Mean No. days	
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day		
No. of years of observa- tions . . . . .	30(a)	30(a)	75	75	96	96	96	96	96	75	
January . . . . .	14.8	51	63	41	8	3	55	1879	Nil (b)	44 27/79	0.2
February . . . . .	14.7	51	65	43	11	3	166	1955	Nil (b)	87 17/55	0.3
March . . . . .	14.7	57	66	46	21	4	145	1934	Nil (b)	77 9/34	0.7
April . . . . .	13.4	61	75	51	46	8	149	1926	Nil 1920	67 30/04	0.8
May . . . . .	12.4	70	81	61	126	14	308	1879	14 1964	76 17/42	1.3
June . . . . .	11.4	75	85	68	187	17	476	1945	55 1877	99 10/20	1.5
July . . . . .	10.9	76	88	69	173	18	425	1958	61 1876	76 4/91	1.4
August . . . . .	10.7	71	83	62	139	18	318	1945	12 1902	74 14/45	1.0
September . . . . .	11.6	66	75	58	81	14	199	1923	9 1916	47 18/66	0.3
October . . . . .	11.7	60	75	52	55	12	200	1890	4 1946	50 4/67	0.4
November . . . . .	12.7	52	66	41	21	6	71	1916	Nil 1891	39 29/56	0.2
December . . . . .	13.9	51	63	39	15	4	81	1951	Nil (b)	47 3/51	0.2
Year { Totals . . . . .	..	..	..	..	883	121	..	..	..	..	8.3
Year { Averages . . . . .	12.7	62	..	..	..	..	..	..	..	..	..
Year { Extremes . . . . .	..	..	88	39	..	..	476	..	Nil (b)	99	..
				6/1945				10/6/20			

(a) Standard thirty years normal (1911-1940). (b) Various years.

Figures such as 27/98, 29/56, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

**CLIMATOLOGICAL DATA: DARWIN, NORTHERN TERRITORY**  
(Lat. 12° 28' S., Long. 130° 51' E. Height above M.S.L. 30 metres)  
**BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS**

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 36 metres)				Mean amt evapo- ration (mm)	No. days thun- der	Mean amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days
		Aver- age km/h	Highest mean speed in one day (km/h)	High- est gust speed (km/h)	Prevailing direction 9 a.m. 3 p.m.				
No. of years of obser- vations . . . . .	90	20	..	22(b)	..	14	35	35	35
January . . . . .	1,006.2	9.3	..	106	W	NW	164	12.9	5.9
February . . . . .	1,006.3	10.6	..	101	W	NW	141	10.2	5.8
March . . . . .	1,007.2	7.5	..	157	W	NW	161	10.6	5.2
April . . . . .	1,009.3	8.8	..	67	SE	NW	164	4.0	2.9
May . . . . .	1,010.9	9.6	..	62	SE	E	172	0.5	2.0
June . . . . .	1,012.2	10.1	..	64	SE	E	172	0.0	1.4
July . . . . .	1,012.8	8.9	..	64	SE	E	176	0.0	1.3
August . . . . .	1,012.6	8.6	..	72	SE	NW	182	0.0	1.1
September . . . . .	1,011.7	8.6	..	64	ENE	NW	206	1.0	1.8
October . . . . .	1,010.5	9.8	..	85	NE	NW	232	5.3	2.7
November . . . . .	1,008.7	8.6	..	117	NW	NW	211	11.8	3.9
December . . . . .	1,006.9	9.8	..	106	NW	NW	189	14.2	4.9
Year { Totals . . . . .	1,009.6	9.2	..	..	..	2,170	70.5	..	121
Averages . . . . .	..	..	..	..	SE	NW	..	3.2	..
Extremes . . . . .	..	..	..	157	..	..	..	..	..

(a) Scale 0-8. (b) Several incomplete years.

**TEMPERATURE AND SUNSHINE**

Month	Air temperature daily readings (°Celsius)			Extreme air temperature (°Celsius)		Extreme temperature (°Celsius)		Mean daily hours sun- shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations . . . . .	90	90	90	90(a)	90(a)	26(b)	..	20
January . . . . .	32.2	25.0	28.6	37.8 2/82	20.0 20/92	75.6 26/42	..	6.1
February . . . . .	31.9	24.8	28.4	38.3 20/87	17.2 25/49	73.2 (c)	..	5.8
March . . . . .	32.4	24.8	28.6	38.9 (d)	19.2 31/45	74.3 23/38	..	7.0
April . . . . .	33.1	24.2	28.7	40.0 7/83	16.0 11/43	72.8 1/38	..	8.6
May . . . . .	32.3	22.4	27.4	39.1 8/84	(e) 14.2 28/67	71.2 5/20	..	9.3
June . . . . .	30.9	20.4	25.7	37.0 17/37	12.1 23/63	68.5 2/16	..	9.7
July . . . . .	30.4	19.6	25.1	36.7 17/88	10.4 29/42	68.9 28/17	..	9.8
August . . . . .	31.4	20.8	26.1	36.7 19/00	13.6 11/63	69.1 28/16	..	10.4
September . . . . .	32.7	23.2	27.9	38.9 20/82	16.7 9/63	69.5 (f)	..	10.0
October . . . . .	33.6	25.0	29.3	40.5 17/92	19.4 8/66	71.4 30/38	..	9.5
November . . . . .	33.8	25.3	29.6	39.6 9/84	19.3 4/50	77.0 14/37	..	8.6
December . . . . .	33.2	25.3	29.3	38.9 20/82	18.3 4/60	76.2 26/23	..	7.1
Year { Averages . . . . .	32.3	23.3	27.9	..	10.4	77.0	..	8.5
Extremes . . . . .	..	..	..	40.5 17/10/1892	.. 29/7/1942	.. 14/11/37	..	..

(a) Years 1882-1941 at Post Office, 1942-1966 at Aerodrome; 1967-1971 at Regional office; sites not strictly comparable. (b) Records discontinued 1942. (c) 5/1938 and 23/1938. (d) 26/1883 and 27/1883. (e) Recorded at Darwin Aerodrome. All other Statistics from 1967 to 1971 at Regional Office. (f) 28/1916 and 3/1921.

**HUMIDITY, RAINFALL, AND FOG**

Month	Vapour pres- sure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m.			Rainfall (millimetres)					Fog Mean No. days
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day	
No. of years of observa- tions . . . . .	85(a)	90	57(b)	57(b)	86(c)	74	105(d)	105(d)	105(d)	35
January . . . . .	31.1	81	89	69	391	19	708 1896	68 1906	296 7/97	0.0
February . . . . .	31.1	81	88	71	330	18	779 1967	13 1931	279 18/55	0.0
March . . . . .	30.7	80	84	69	260	17	595 1965	21 1911	182 6/19	0.0
April . . . . .	27.0	72	80	60	103	8	603 1891	Nil 1950	158 4/59	0.0
May . . . . .	21.8	65	76	49	14	1	261 1882	Nil (e)	56 6/22	0.0
June . . . . .	18.7	63	75	52	3	0	39 1902	Nil (e)	36 10/02	0.4
July . . . . .	17.6	62	71	47	1	0	65 1900	Nil (e)	43 2/00	1.1
August . . . . .	20.6	66	73	53	2	0	84 1947	Nil (e)	80 22/47	0.8
September . . . . .	24.7	68	73	54	13	2	108 1942	Nil (e)	71 21/42	0.2
October . . . . .	27.7	68	72	60	50	5	339 1954	Nil (e)	95 18/56	0.0
November . . . . .	29.3	70	75	62	126	11	399 1938	10 1870	120 9/51	0.0
December . . . . .	30.5	75	83	65	243	16	583 1965	25 1934	200 28/10	0.0
Year { Totals . . . . .	..	..	..	..	1,536	97	..	..	..	2.5
Averages . . . . .	25.9	71	..	..	..	..	779 2/67	Nil (f)	296	..
Extremes . . . . .	..	..	89	47	..	..	..	..	7/1/1897	..

(a) Records to 1966 at Aerodrome. (b) 1882 to 1938 at Post Office. (c) 1869 to 1962 at Post Office; 8 years missing. (d) Highest or lowest at either Post Office, Aerodrome or Regional Office Sites. (e) Various years. (f) April to October. Various years. Figures such as 2/82, 26/42, etc., indicate in respect of the month of reference, the day and year of occurrence. Dates in italics relate to nineteenth century.



## CLIMATOLOGICAL DATA: ADELAIDE, SOUTH AUSTRALIA

(Lat. 34° 56' S., Long. 138° 35' E. Height above M.S.L. 43 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 23 metres)					Mean amt evapora- (mm)	No. days thunder	Mean amt clouds	
		Aver- age km/h	Highest mean speed in one day (km/h)	High- est gust speed (km/h)	Prevailing direction				9 a.m., 3 p.m., (a)	No. clear days
					9 a.m.	3 p.m.				
No. of years of obser- vations . . . . .	115	20(b)	20(b)	55	30(c)	30(c)	5(d)	104	100	57
January . . . . .	1,013.2	12.8	32.2	12/70	116	SW	275	1.5	2.9	12.2
February . . . . .	1,014.3	12.1	28.8	25/67	106	NE	232	1.1	3.0	10.7
March . . . . .	1,017.2	11.4	30.7	24/64	126	S	184	0.8	3.2	10.7
April . . . . .	1,019.8	11.4	37.4	10/56	130	NE	131	1.0	4.1	6.6
May . . . . .	1,020.0	11.3	37.8	19/53	113	NE	76	1.0	4.7	4.6
June . . . . .	1,019.8	11.6	29.7	16/70	108	NE	56	0.9	5.0	3.9
July . . . . .	1,020.0	11.8	32.9	13/64	148	NE	58	0.8	4.8	3.6
August . . . . .	1,019.0	12.8	38.2	8/55	121	NE	77	1.1	4.2	4.9
September . . . . .	1,017.6	13.2	34.9	16/65	111	NNE	115	1.4	4.3	5.6
October . . . . .	1,016.0	13.6	35.4	1/68	121	NNE	189	1.9	4.2	5.7
November . . . . .	1,015.0	13.9	36.3	14/68	130	SW	212	2.0	3.9	6.6
December . . . . .	1,013.3	13.5	31.1	18/69	121	SW	249	1.5	3.4	9.0
Year { Totals . . . . .	1,017.1	..	..	..	..	..	1,854	15.0	..	84.1
Year { Averages . . . . .	1,017.1	..	..	..	NE	SW	..	..	4.0	..
Year { Extremes . . . . .	..	..	38.2	8/8/65	148	..	..	..	..	..

(a) Scale 0-8.

(b) Records of cup anemometer.

(c) Standard 30 years normal (1931-1960).

(d) Class 'A' pan.

## TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius)			Extreme air temperature (°Celsius)		Extreme temperature (°Celsius)		Mean daily hours sun-shine	
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass		
No. of years of observations	115	115	115	115	115	54(a)	111	90	
January	29.6	16.4	23.0	47.6	7.3	21/84	82.3	18/82	10.0
February	29.4	16.6	23.0	45.3	7.5	23/18	76.9	10/00	9.3
March	26.9	15.1	21.0	43.6	6.6	21/33	78.9	17/83	7.8
April	22.7	12.6	17.7	37.0	4.2	15/59	68.3	1/83	5.9
May	18.7	10.2	14.5	31.9	2.7	(b)	64.6	12/79	4.8
June	15.8	8.3	12.1	25.6	0.3	(c)	59.3	18/79	4.1
July	14.9	7.2	11.1	23.3	0.0	24/08	56.9	26/90	4.3
August	16.4	7.8	12.1	29.4	0.2	17/59	60.0	31/92	5.3
September	18.9	8.9	13.9	35.1	0.4	4/58	71.4	23/82	6.1
October	22.1	10.8	16.5	39.4	2.3	20/58	72.2	30/21	7.2
November	25.2	12.9	19.1	45.3	4.9	2/09	74.9	20/78	8.5
December	27.8	14.9	21.3	45.9	6.1	29/31	79.8	7/99	9.4
Year { Averages	22.4	11.8	17.1	..	..	..	..	..	6.9
Year { Extremes	..	..	..	47.6	0.0	..	82.3	..	..
				12/1/39	24/7/08	18/1/62	24/6/44		

(a) Discontinued 1934, incomplete 1931-1934.

(b) 26/1895 and 24/04.

(c) 27/1876 and 24/44.

(d) 16/1861 and 4/06.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m.			Rainfall (millimetres)				Fog Mean No. days	
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day
No. of years of observa- tions . . . . .	104	104	104	104	133	133	133	133	72	
January . . . . .	11.9	41	59	29	19	4	84 1941	Nil (a)	58 2/89	0.0
February . . . . .	12.3	43	57	30	20	4	155 1925	Nil (a)	141 7/25	0.0
March . . . . .	11.7	47	62	29	24	5	117 1878	Nil (a)	89 5/78	0.0
April . . . . .	11.3	56	72	37	44	10	155 1971	Nil 1945	80 5/60	0.0
May . . . . .	10.8	67	77	49	69	13	177 1875	2 1934	70 1/53	0.4
June . . . . .	9.9	75	84	63	73	15	218 1916	6 1958	54 1/20	1.1
July . . . . .	9.4	76	87	66	66	16	138 1890	10 1899	45 10/65	1.3
August . . . . .	9.7	70	80	54	62	16	157 1852	8 1944	57 19/51	0.6
September . . . . .	9.9	60	72	44	51	13	148 1923	7 1951	40 20/23	0.2
October . . . . .	10.1	51	67	29	44	11	133 1949	1 1969	57 16/08	0.0
November . . . . .	10.5	45	64	31	31	8	113 1839	1 1963	75 12/60	0.0
December . . . . .	11.1	40	56	31	26	6	101 1861	Nil 1904	61 23/13	0.0
Year { Totals . . . . .	..	..	..	..	529	121	..	..	..	3.6
Year { Averages . . . . .	10.7	56	..	..	..	..	..	..	..	..
Year { Extremes . . . . .	..	..	87	29	..	..	218	Nil (b)	141	..
							6/1916		7/2/25	

(a) Various years.

(b) December to April, various years.

Figures such as 3/55, 21/84, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

CLIMATOLOGICAL DATA: BRISBANE, QUEENSLAND

(Lat. 27° 28' S., Long. 153° 2' E. Height above M.S.L. 41 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 32 metres)						Mean amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days	
		Average km/h	Highest mean speed in one day (km/h)	High- est gust speed (km/h)	Prevailing direction		Mean amt evapo- ration (mm)			
					9 a.m.	3 p.m.				
No. of years of observa- tions	85	56	56	56	30(b)	30(b)	63	85	80	64
January	1,011.7	12.3	31.8	23/47	SE	NE	177	4.7	4.6	3.4
February	1,012.5	12.1	35.7	21/54	SE	NE	141	3.8	4.7	2.4
March	1,014.7	11.6	32.7	1/29	S	E	134	2.3	4.3	5.5
April	1,017.3	10.5	26.9	3/25	S	E	111	1.4	3.6	7.9
May	1,018.4	9.9	28.8	17/26	SW	SE	87	0.6	3.3	10.0
June	1,018.5	10.2	30.6	14/28	SW	WSW	70	0.5	3.3	10.5
July	1,018.8	9.9	35.4	13/54	SW	WSW	75	0.4	2.9	13.3
August	1,018.9	10.2	26.9	4/35	SW	NE	96	1.4	2.6	13.5
September	1,017.5	10.5	25.9	1/48	SW	NE	118	2.9	2.7	12.7
October	1,015.9	11.1	16.8	1/41	S	NE	149	4.4	3.4	8.6
November	1,014.1	11.6	24.9	10/28	SE	NE	167	5.8	3.9	6.1
December	1,012.1	12.1	31.4	15/26	SE	NE	184	6.7	4.3	4.4
Year { Totals	..	..	..	..	..	..	1,509	34.9	..	98.3
Year { Averages	1,015.9	11.0	..	..	SW	NE	..	..	3.6	..
Year { Extremes	..	..	35.7	127	..	..	..	..	..	..
			21/2/54							

(a) Scale 0-8. (b) Standard thirty years normal (1911-1940).

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius)			Extreme air temperature (°Celsius)		Extreme temperature (°Celsius)		Mean daily hours sun-shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	85	85	85	85	85	50(c)	84	63
January	29.4	20.5	25.0	43.2	26/40	14.9	4/93	7.6
February	28.9	20.4	24.7	40.9	21/25	14.7	21/31	7.0
March	27.9	19.2	23.5	38.8	13/65	11.3	29/13	6.8
April	26.0	16.5	21.2	35.1	(a)	6.9	25/25	7.1
May	23.1	13.1	18.1	32.4	21/23	4.8	30/51	6.8
June	20.8	10.7	15.7	31.6	19/18	2.4	29/08	6.5
July	20.3	9.4	14.9	29.1	23/46	2.3	(b)	7.1
August	21.8	10.1	16.0	32.8	14/46	2.7	13/64	7.8
September	24.0	12.7	18.4	38.3	22/43	4.8	1/96	8.3
October	26.1	15.7	20.9	40.7	30/58	6.3	3/99	8.3
November	27.8	17.9	22.9	41.2	18/13	9.2	2/05	8.3
December	29.1	19.7	24.4	41.1	26/93	13.5	5/55	8.1
Year { Averages	25.4	15.5	20.5	43.2	..	2.3	(b)	7.5
Year { Extremes	..	..	..	26/1/1940		76.2	2/1/1937	..

(a) 9/1896 and 5/03. (b) 12/1894 and 2/1896. (c) 1887-1926, 1936-March 1947.

HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m.			Rainfall (millimetres)				Fog Mean No. days	
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day
No. of years of observa- tions	64	85	84	84	120	112	119	119	85	
January	21.7	66	79	53	162	13	704	1895	0.5	
February	22.0	69	82	55	161	13	1,026	1893	0.6	
March	20.9	71	85	56	146	15	865	1870	1.2	
April	17.5	71	80	56	87	12	388	1867	2.2	
May	14.3	71	85	59	69	9	352	1876	3.1	
June	12.1	72	84	54	70	8	647	1967	3.0	
July	11.1	70	88	53	55	7	231	1965	3.1	
August	11.7	67	80	53	47	7	373	1879	3.6	
September	13.8	63	76	47	49	8	133	1886	2.6	
October	16.0	60	72	48	71	9	290	1949	1.2	
November	18.1	59	72	45	94	10	315	1917	0.5	
December	20.1	61	70	51	131	12	441	1942	0.4	
Year { Totals	..	..	..	..	1,142	123	..	..	22.0	
Year { Averages	16.6	67	..	..	..	..	..	..	..	
Year { Extremes	..	..	88	45	..	..	1,026	Nil	..	
							2/1893	Various	21/1/1887	

(a) 1841 and 1951. (b) 1862, 1869 and 1880. (c) Less than 1 mm.

Figures such as 23/47, 4/93, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

## CLIMATOLOGICAL DATA: SYDNEY, NEW SOUTH WALES

(Lat. 33° 52' S., Long. 151° 12' E. Height above M.S.L. 42 metres)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 18 metres)					Mean amt evapo- ration (mm)	No. days thun- der	Mean amt clouds		
		Aver- age km/h	Highest mean speed in one day (km/h)	High- est gust speed (km/h)	Prevailing direction				9 a.m., 3 p.m., (a)	No. clear days	
					9 a.m.	3 p.m.					
No. of years of obser- vations . . . . .	62	25(b)	25(b)	25(b)	25(b)	25(b)	86	52	110	61	
January . . . . .	1,012.6	12.3	30.3	10/49	150	NE	NE	135	3.4	4.7	5.0
February . . . . .	1,014.0	11.6	30.3	18/57	101	NE	ENE	107	2.5	4.8	4.6
March . . . . .	1,016.4	10.5	33.3	10/44	93	WNW	ENE	93	1.7	4.4	5.8
April . . . . .	1,018.2	10.2	36.2	24/44	116	W	ENE	69	1.4	4.1	7.3
May . . . . .	1,018.5	10.5	33.8	18/55	101	W	ENE	49	0.9	3.9	7.8
June . . . . .	1,018.8	11.6	36.0	10/47	135	W	WSW	38	0.8	4.0	8.1
July . . . . .	1,018.5	11.5	34.3	20/51	106	W	WSW	40	0.8	3.5	10.6
August . . . . .	1,017.9	12.1	39.6	9/51	109	WNW	WNW	51	1.5	3.3	10.6
September . . . . .	1,016.9	11.6	35.1	23/42	113	WNW	NE	70	1.9	3.5	9.0
October . . . . .	1,015.0	12.3	39.4	1/57	153	WNW	ENE	99	2.8	4.1	6.6
November . . . . .	1,013.4	12.4	31.9	21/54	114	WNW	ENE	119	3.7	4.5	5.3
December . . . . .	1,012.0	12.3	36.2	11/52	121	NE	ENE	137	4.0	4.6	4.8
Year { Totals . . . . .	1,016.0	11.6	..	..	..	..	..	1,006	25.4	..	85.5
Year { Averages . . . . .	1,016.0	11.6	..	..	..	WNW	ENE	..	..	4.2	..
Year { Extremes . . . . .	..	..	39.6	..	153	..	..	..	..	..	..
			9/8/51								

(a) Scale 0-8. (b) Years 1938-1962 inclusive.

## TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius)			Extreme air temperature (°Celsius)		Extreme temperature (°Celsius)		Mean daily hours sun-shine				
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass					
No. of years of observations	113	113	113	113	113	84(a)	113	51				
January	25.7	18.3	22.0	45.3	14/39	10.6	18/49	73.5	26/15	6.5	6/25	7.2
February	25.4	18.4	21.9	42.1	8/26	9.6	28/63	76.3	14/39	6.0	22/33	6.8
March	24.5	17.3	20.9	39.2	3/69	9.3	14/86	70.2	10/26	4.4	17/13	6.3
April	22.1	14.5	18.3	33.0	(b)	7.0	27/64	62.3	10/77	0.7	24/09	6.1
May	19.0	11.2	15.1	30.0	1/19	4.4	30/62	54.3	1/96	-1.5	25/17	5.8
June	16.6	9.1	12.8	26.9	11/31	2.1	22/32	52.1	2/23	-2.2	22/32	5.3
July	15.8	7.8	11.8	25.7	22/26	2.2	12/90	51.9	19/77	-4.4	4/93	6.1
August	17.4	8.7	13.1	30.4	24/54	2.7	3/72	65.0	30/78	-3.3	4/09	6.8
September	19.6	10.8	15.2	34.6	26/65	4.9	2/45	61.2	12/78	-1.1	17/05	7.1
October	21.9	13.3	17.6	37.4	4/42	5.7	6/27	66.8	20/33	0.4	9/05	7.3
November	23.5	16.3	19.4	40.3	6/46	7.7	1/05	70.3	28/99	1.9	21/67	7.6
December	24.9	17.2	21.1	42.2	20/57	9.1	3/24	73.5	27/89	5.2	3/24	7.3
Year { Averages	21.4	13.6	17.4									
Extremes				45.3	..	2.1	..	76.3	..	-4.4	..	6.6
				14/1/39	22/6/32	14/2/39	4/7/1893					

(a) Records discontinued 1946. (b) 1/36 and 10/69.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m.			Rainfall (millimetres)					Fog Mean No. days
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day	
No. of years of observa- tions . . . . .	96	96	96	96	113	113	113	113	113	57
January . . . . .	18.8	68	78	58	95	13	388	1911	6 1932	180 13/11
February . . . . .	19.2	70	81	60	113	13	564	1950	3 1939	226 25/73
March . . . . .	18.3	74	85	62	127	14	521	1942	8 1965	281 28/42
April . . . . .	15.0	74	87	63	127	13	622	1861	2 1868	191 29/60
May . . . . .	11.9	75	90	63	124	13	585	1919	4 1957	212 28/89
June . . . . .	10.2	76	89	63	131	12	643	1950	4 1962	131 16/84
July . . . . .	9.6	74	88	59	106	11	336	1950	2 1970	198 7/31
August . . . . .	9.5	68	84	54	81	11	378	1899	1 1885	140 22/71
September . . . . .	11.3	66	79	49	70	11	357	1879	2 1882	145 10/79
October . . . . .	13.0	62	77	46	74	12	283	(a)	2 1971	162 13/02
November . . . . .	15.0	62	79	42	78	12	577	1961	2 1915	133 27/55
December . . . . .	17.6	64	77	51	81	13	402	1920	6 1913	121 13/10
Year { Totals . . . . .	..	..	..	..	1,207	148	..	..	..	..
Year { Averages . . . . .	14.1	69	..	..	..	..	..	..	..	..
Year { Extremes . . . . .	..	..	90	42	..	..	643	6/1950	1 8/1885	281 ..
										28/3/1942

(a) 1916 and 1959.

Figures such as 10/49, 28/63, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.



**CLIMATOLOGICAL DATA: CANBERRA, AUSTRALIAN CAPITAL TERRITORY**  
(Lat. 35° 19' S., Long. 149° 11' E. Height above M.S.L. 571 metres)  
**BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS**

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 11 metres)					Mean amt evapo- ration (mm)	No. days thun- der	Mean amt clouds		No. clear days
		Average km/h	Highest mean speed in one day (km/h)	High- est gust speed (km/h)	Prevailing direction				9 a.m., 3 p.m., 9 p.m. (a)		
					9 a.m.	3 p.m.					
No. of years of obser- vations . . . . .	33	42(b)	42(b)	33(c)	33(c)	33(c)	38(d)	33	33	33(e)	
January . . . . .	1,012.1	6.6	24 24/33	104	NW	NW	197	3.4	4.1	7.7	
February . . . . .	1,013.0	6.1	25 24/33	104	NW	NW	155	3.0	4.3	6.7	
March . . . . .	1,016.1	5.3	29 28/42	111	SE	NW	130	1.6	4.1	8.0	
April . . . . .	1,018.8	5.0	30 8/45	106	NW	NW	80	0.8	4.2	7.3	
May . . . . .	1,018.9	4.3	21 27/58	104	NW	NW	48	0.4	4.4	6.8	
June . . . . .	1,021.1	4.8	26 2/30	96	NW	NW	31	0.2	4.5	6.8	
July . . . . .	1,020.3	5.0	38 7/31	102	NW	NW	31	0.1	4.4	7.3	
August . . . . .	1,018.6	6.0	25 25/36	113	NW	NW	44	0.8	4.3	6.8	
September . . . . .	1,017.3	6.0	28 28/34	107	NW	NW	71	1.2	4.0	8.3	
October . . . . .	1,014.9	6.6	23 12/57	119	NW	NW	108	2.1	4.3	6.4	
November . . . . .	1,011.9	6.9	28 28/42	128	NW	NW	145	3.2	4.3	5.9	
December . . . . .	1,010.5	6.9	26 11/38	106	NW	NW	183	3.5	4.1	7.5	
Year { Totals . . . . .			..	..	..	..	1,223	20.3	..	85.5	
Year { Averages . . . . .	1,016.1	5.8	..	..	NW	NW	..	..	4.3	7.1	
Year { Extremes . . . . .	..	..	38 7/7/31	128	..	..	..	..	..	..	

(a) Scale 0-8. (b) Recorded at Forestry and Timber Bureau, Yarralumla, where a cup anemometer is installed. (c) Recorded at Meteorological Office, R.A.A.F. Fairbairn, where a Dines Pressure Tube anemometer is installed. (d) Australian tank, Yarralumla, 1929-66. (e) 1940-72. Formerly assessed over 37-year period at Yarralumla.

**TEMPERATURE AND SUNSHINE**

Month	Air temperature daily readings (°Celsius)			Extreme air temperature (°Celsius)		Extreme temperature (°Celsius)		Mean daily hours sun-shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	33	33	33	33	33	..	21	35
January	27.5	12.8	20.1	41.4 31/68	1.8 1/56	..	-0.4 1/56	8.9
February	26.6	12.5	19.5	42.2 1/68	3.0 16/62	..	0.2 17/70	8.2
March	24.4	10.4	17.4	36.4 9/40	-1.1 24/67	..	-4.0 (a)	7.5
April	19.6	6.4	13.0	32.6 12/68	-3.3 26/72	..	-8.3 24/69	7.0
May	14.8	2.7	8.7	24.5 10/67	-7.3 16/57	..	-10.4 26/69	5.5
June	12.0	0.7	6.3	20.1 3/57	-8.5 8/57	..	-13.4 25/71	4.7
July	11.0	-0.4	5.3	16.9 25/72	-10.0 11/71	..	-15.1 11/71	5.2
August	12.6	0.8	6.7	21.7 24/54	-7.7 11/69	..	-12.8 11/69	6.1
September	15.9	2.6	9.3	28.6 26/65	-5.6 5/40	..	-10.6 12/71	7.4
October	19.1	5.7	12.4	32.7 13/46	-3.3 4/57	..	-6.2 4/57	8.0
November	22.3	8.2	15.3	38.8 19/44	-1.8 28/67	..	-6.3 28/67	8.8
December	25.9	11.0	18.5	38.8 21/53	1.1 18/64	..	-3.9 18/64	9.0
Year { Averages	19.3	6.1	12.7	42.2 ..	-10.0 ..	..	-15.1 ..	7.2
Year { Extremes	..	..	..	1/2/68	11/7/71	..	11/7/71	..

(a) 30/58 and 24/67.

**HUMIDITY, RAINFALL, AND FOG**

Month	Vapour pres- sure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m.			Rainfall (millimetres)					Fog Mean No. days
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day	
No. of years of observa- tions . . . . .	33(a)	33	33	33	33	33	33	33	33	33
January . . . . .	13.1	60	75	42	59	8	164 1941	1 1947	95 12/45	0.6
February . . . . .	14.0	65	81	53	55	7	145 1948	Nil 1968	53 3/46	0.9
March . . . . .	12.3	69	81	53	52	7	312 1950	1 1954	66 5/59	1.7
April . . . . .	10.0	75	84	38	48	7	154 1940	2 1942	75 2/59	2.9
May . . . . .	8.7	83	96	73	52	9	150 1953	2 1961	96 3/48	6.9
June . . . . .	7.1	88	97	73	38	9	126 1956	5 1971	45 25/56	7.2
July . . . . .	6.6	84	93	68	36	10	103 1960	4 1970	35 10/57	7.1
August . . . . .	7.1	80	92	58	44	12	106 1955	7 1944	28 3/51	4.0
September . . . . .	8.1	72	82	55	49	10	116 1970	6 1946	41 16/62	2.6
October . . . . .	10.0	67	82	50	68	11	148 1959	6 1940	105 21/59	1.8
November . . . . .	10.7	59	76	38	62	9	135 1961	13 1940	64 9/50	0.6
December . . . . .	12.3	57	74	43	59	8	215 1947	Nil 1967	87 30/48	0.1
Year { Totals . . . . .	..	..	..	..	622	107	..	..	..	36.4
Year { Averages . . . . .	10.0	72	..	38	..	..	312 3/50	Nil (b)	105	..
Year { Extremes . . . . .	..	..	97	38	..	..	..	..	21/10/59	..

(a) Formerly assessed over 38-year period at Forestry and Timber Bureau, Yarralumla. (b) 12/67 and 2/68.

Data shown in the above tables relate to the Meteorological Office, R.A.A.F., Fairbairn, except where otherwise indicated, and cover years up to 1972. Figures such as 23/33, 31/68, etc. indicate, in respect of the month of reference, the day and year of the occurrence.

CLIMATOLOGICAL DATA: MELBOURNE, VICTORIA

(Lat. 37° 49' S., Long. 144° 58' E. Height above M.S.L. 35 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 28 metres)						Mean amt evapo- ration (mm)	No. days thunder	Mean amt clouds		No. clear days
		Average km/h	Highest mean speed in one day (km/h)	High- est gust speed (km/h)	Prevailing direction		9 a.m., 3 p.m., 9 p.m. (a)			No. clear days		
					9 a.m.	3 p.m.						
No. of years of obser- vations . . . . .	116	33(b)	60	63	54	54	94(c)	116	65	65	65	
January . . . . .	1,012.8	13.1	34.0	27/41	S	S	165	1.7	4.1	6.7	6.7	
February . . . . .	1,014.4	12.8	30.6	13/47	S	S	129	1.9	4.0	6.0	6.0	
March . . . . .	1,016.8	11.5	29.0	3/61	N	S	105	1.3	4.3	5.5	5.5	
April . . . . .	1,019.0	11.2	33.7	27/71	N	N	64	0.7	4.7	4.3	4.3	
May . . . . .	1,019.1	11.5	33.0	4/61	N	N	39	0.4	5.2	2.9	2.9	
June . . . . .	1,018.9	11.7	36.7	16/47	N	N	29	0.2	5.3	2.8	2.8	
July . . . . .	1,018.6	12.9	36.9	24/70	N	N	29	0.2	5.1	2.5	2.5	
August . . . . .	1,017.6	12.7	34.3	20/42	N	N	39	0.6	5.0	2.8	2.8	
September . . . . .	1,016.0	12.8	34.0	15/64	N	S	59	0.8	4.8	3.7	3.7	
October . . . . .	1,014.7	13.1	30.4	6/68	N	S	86	1.6	4.8	3.5	3.5	
November . . . . .	1,013.9	13.5	35.8	8/71	SW	S	115	2.0	4.8	3.3	3.3	
December . . . . .	1,012.4	13.4	33.8	12/52	S	S	147	2.2	4.5	4.4	4.4	
Year { Totals . . . . .	1,016.2	12.5	..	..	..	..	1,006	13.6	..	48.4	48.4	
Year { Averages . . . . .	..	..	..	..	N	S	..	..	4.7	..	..	
Year { Extremes . . . . .	..	..	36.9	119	..	..	..	..	..	..	..	
24/7/70												

(a) Scale 0-8. (b) Early records not comparable. (c) Records to 1966.

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius)			Extreme air temperature (°Celsius)		Extreme temperature (°Celsius)		Mean daily hours sun-shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	117	117	117	117	117	86(a)	113	52(b)
January . . . . .	25.8	13.9	19.8	45.6	13/39	81.4	28/85	8.1
February . . . . .	25.6	14.2	19.9	43.1	7/01	75.3	15/70	7.5
March . . . . .	23.8	12.8	18.3	41.7	11/40	73.6	1/68	6.6
April . . . . .	20.1	10.5	15.3	34.9	5/38	66.7	8/61	5.1
May . . . . .	16.4	8.3	12.4	28.7	7/05	61.4	2/59	3.9
June . . . . .	13.9	6.6	10.3	22.4	2/57	53.9	11/61	3.4
July . . . . .	13.2	5.7	9.4	20.7	22/26	52.1	27/80	3.7
August . . . . .	14.8	6.4	10.6	25.0	20/85	58.6	29/69	4.6
September . . . . .	17.1	7.6	12.3	31.4	28/28	61.2	20/67	5.5
October . . . . .	19.5	9.2	14.4	36.9	24/14	67.9	28/68	5.9
November . . . . .	21.8	10.8	16.3	40.9	27/94	70.9	29/65	6.5
December . . . . .	24.1	12.5	18.3	43.7	15/76	76.8	20/69	7.3
Year { Averages . . . . .	19.7	9.9	14.8	..	..	..	..	5.7
Year { Extremes . . . . .	..	..	..	45.6	-2.8	81.4	-6.7	..
13/1/39				21/7/69	14/1/62	30/6/29	..	

(a) Discontinued 1946. (b) Discontinued 1967. (c) 17/1884 and 20/1897.

HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m.			Rainfall (millimetres)					Fog Mean No. days
		Mean	Highest mean	Lowest mean	Mean of days mthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day	
No. of years of observa- tions . . . . .	65	65	65	65	117	117	117	117	117	115
January . . . . .	13.1	60	68	50	48	8	176	1963	(a) 1932	0.1
February . . . . .	14.1	63	77	48	49	7	238	1972	(a) 1965	0.3
March . . . . .	13.3	66	79	50	53	9	191	1911	3 1934	0.7
April . . . . .	11.7	72	82	66	59	11	195	1960	Nil 1923	1.8
May . . . . .	10.3	79	88	70	57	14	142	1942	3 1934	3.7
June . . . . .	9.3	83	92	73	50	14	114	1859	8 1858	4.6
July . . . . .	8.9	81	86	75	49	15	178	1891	15 1902	4.4
August . . . . .	9.1	75	82	65	49	15	111	1939	12 1903	2.3
September . . . . .	9.5	68	76	60	59	14	201	1916	13 1907	0.9
October . . . . .	10.5	63	71	52	67	14	193	1869	7 1914	0.4
November . . . . .	11.3	60	69	52	59	12	206	1954	6 1895	0.2
December . . . . .	12.5	60	69	48	58	10	182	1863	1 1972	0.2
Year { Totals . . . . .	..	..	..	..	657	143	..	..	100	19.6
Year { Averages . . . . .	11.1	69	..	..	..	..	..	..	..	..
Year { Extremes . . . . .	..	..	92	48	..	..	238	2/72	Nil 4/23	..
29/1/63										

(a) Less than 1 mm.

Figures such as 27/41, 28/85, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

## CLIMATOLOGICAL DATA: HOBART, TASMANIA

(Lat. 42° 53' S., Long. 147° 20' E. Height above M.S.L. 54 metres)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 12 metres)					Mean amt evapora- tion (mm)	No. days thun- der	Mean amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days
		Aver- age km/h	Highest mean speed in one day (km/h)	High- est gust speed (km/h)	Prevailing direction					
					9 a.m.	3 p.m.				
No. of years of obser- vations . . . . .	86	61	62	81	30(b)	30(b)	60	62	87	30(b)
January . . . . .	1,010.6	12.6	33.5	30/16	130	NNW	SSE	128	1.0	5.0
February . . . . .	1,012.8	11.5	40.6	4/27	121	NNW	SSE	98	1.0	4.9
March . . . . .	1,014.4	10.9	34.4	13/38	127	NW	SSE	84	0.7	4.8
April . . . . .	1,015.4	10.9	38.8	9/52	119	NW	W	54	0.4	5.0
May . . . . .	1,015.4	10.4	35.4	21/65	135	NNW	NW	35	0.0	5.0
June . . . . .	1,015.1	10.2	38.2	27/20	132	NW	NW	24	0.0	5.0
July . . . . .	1,014.1	10.7	36.9	22/53	129	NNW	NNW	24	0.0	4.8
August . . . . .	1,012.8	11.0	41.0	19/26	140	NNW	NW	34	0.1	4.9
September . . . . .	1,011.4	12.5	43.1	28/65	150	NNW	NW	53	0.1	4.9
October . . . . .	1,010.2	12.6	32.4	3/65	140	NNW	SW	79	0.4	5.2
November . . . . .	1,009.8	12.8	34.1	18/15	135	NNW	S	98	0.6	5.3
December . . . . .	1,009.4	12.3	37.7	1/34	122	NNW	SSE	115	0.9	5.3
Year { Totals . . . . .	..	..	..	..	..	..	826	5.2	..	22.1
Year { Averages . . . . .	1,012.6	11.8	..	..	NNW	W	..	..	5.0	..
Year { Extremes . . . . .	..	..	43.1	150	..	..	..	..	..	..
			28/9/65							

(a) Scale 0-8. (b) Standard thirty years normal (1911-1940).

## TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius)			Extreme air temperature (°Celsius)		Extreme temperature (°Celsius)		Mean daily hours sun shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	89	89	89	89	89	57(a)	84	51
January . . . . .	21.4	11.5	16.5	40.6 (b)	4.5 (c)	71.1 (d)	—0.8 19/97	7.9
February . . . . .	21.5	11.7	16.6	40.2 12/99	3.9 20/87	73.9 24/98	—2.1 —/87	7.0
March . . . . .	20.0	10.5	15.2	37.3 13/40	1.8 31/26	66.1 26/44	—2.5 30/02	6.3
April . . . . .	17.0	8.7	12.9	30.6 1/41	0.7 14/63	61.1 18/93	—3.9 —/86	5.1
May . . . . .	14.2	6.7	10.4	25.5 5/21	—1.5 30/02	53.3 (e)	—6.7 19/02	4.2
June . . . . .	11.7	5.1	8.4	20.7 1/07	—1.6 28/44	50.0 12/94	—7.7 24/63	3.9
July . . . . .	11.4	4.5	7.9	19.0 14/34	—2.4 11/95	49.4 12/93	—7.4 16/86	4.3
August . . . . .	12.9	5.0	8.9	22.0 28/14	—1.8 5/62	54.4 —/87	—6.6 7/09	5.0
September . . . . .	14.9	6.1	10.5	27.6 23/26	—1.1 12/41	58.9 23/93	—7.6 16/26	5.9
October . . . . .	16.9	7.5	12.2	33.4 24/14	0.0 12/89	68.9 9/93	—4.6 (f)	6.2
November . . . . .	18.5	9.0	13.5	36.9 26/37	1.7 16/41	55.6 19/92	—3.3 1/08	7.0
December . . . . .	20.2	10.5	15.4	40.7 30/97	3.4 3/06	71.9 10/39	—2.7 —/86	7.2
Year { Averages . . . . .	16.7	8.1	12.4	..	..	73.9	..	5.8
Year { Extremes . . . . .	..	..	..	40.7	—2.4	..	—7.7	..
				30/12/1897	11/7/1895	24/2/1868	24/6/1963	

(a) Period 1934-1938 not comparable; records discontinued 1946. (b) 1/1900 and 19/1959. (c) 9/1937 and 11/1937. (d) 5/1886 and 13/1905. (e) —/1899 and —/1893. (f) 1/1886 and 1/1899.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (mb)	Rel. hum. (%) at 9 a.m.			Rainfall (millimetres)				Fog Mean No. days	
		Mean	Highest mean	Lowest mean	Mean mthly	No. of days of rain	Greatest monthly	Least monthly		Greatest sn one day
No. of years of observa- tions . . . . .	77(a)	78	78	78	89	88	89	89	89	60
January . . . . .	11.0	58	81	45	49	11	150 1893	4 (b)	75 30/16	0.1
February . . . . .	11.7	62	83	49	42	10	232 1854	3 1914	56 1/54	0.0
March . . . . .	11.0	65	78	52	47	11	255 1946	7 1943	88 17/46	0.3
April . . . . .	10.0	70	84	57	55	12	248 1960	2 1904	133 23/60	0.3
May . . . . .	8.8	75	86	51	49	14	214 1958	4 1913	45 2/93	1.1
June . . . . .	7.9	78	91	61	59	15	238 1954	7 1886	147 7/54	1.5
July . . . . .	7.6	78	87	72	53	15	155 1967	4 1950	64 18/22	1.3
August . . . . .	7.9	73	86	59	49	16	258 1858	8 1892	58 14/90	0.0
September . . . . .	8.3	66	81	52	52	15	201 1957	10 1951	156 15/57	0.2
October . . . . .	9.1	62	74	52	64	17	193 1947	10 1914	65 4/06	0.1
November . . . . .	9.6	58	73	49	56	14	227 1849	8 1921	94 30/85	0.1
December . . . . .	10.6	58	73	42	57	13	229 1875	4 1931	85 5/41	0.1
Year { Totals . . . . .	..	..	..	..	632	163	..	..	..	5.6
Year { Averages . . . . .	9.5	67	..	..	..	..	..	..	..	..
Year { Extremes . . . . .	..	..	91	42	..	..	258	2	156	..
							8/1858	4/1904	15/9/57	

(a) 1894-1970. (b) 1915 and 1958.

Figures such as 30/16, 12/99, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.



**Rainfall and temperatures, various cities**

Year Book No. 34, page 28, shows rainfall and temperature, and No. 38, page 42, temperature, for various important cities throughout the world and for the Australian capitals.

**Climatological data for selected Australian country towns**

The following table shows some of the more important climatological data for selected Australian country towns, based on standard thirty years normals (1911-1940).

**CLIMATOLOGICAL DATA FOR SELECTED AUSTRALIAN COUNTRY TOWNS**

Town	Rainfall		Temperature				Relative humidity			
							Average index of mean relative humidity(a), January	Average index of mean relative humidity(a), July	Mean 3 p.m., January (%)	Mean 3 p.m., July (%)
	Average annual rainfall (mm)	Average number of wet days	Mean maximum, January (°C.)	Mean maximum, July (°C.)	Mean minimum, January (°C.)	Mean minimum, July (°C.)				
<b>WESTERN AUSTRALIA</b>										
Albany . .	1,008	172	23.2	21.1	14.7	7.9	73	76	65	70
Broome . .	582	38	32.9	27.7	26.2	13.9	75	52	67	43
Bunbury . .	843	125	27.8	16.9	15.1	8.4	66	78	57	71
Carnarvon . .	229	35	30.7	22.1	22.3	10.9	64	66	61	57
Esperance . .	678	124	24.8	16.7	15.5	7.4	70	77	63	65
Geraldton . .	472	80	29.2	19.8	19.1	10.9	61	68	60	60
Kalgoorlie . .	241	62	34.0	16.9	17.9	6.1	43	66	27	50
Meekatharra . .	234	36	38.0	19.7	22.9	6.7	31	59	21	44
Narrogin . .	544	108	30.7	14.4	13.5	5.2	..	..	..	..
Port Hedland . .	279	20	34.6	26.3	26.3	13.1	67	49	63	47
Wyndham . .	640	55	35.5	29.4	26.8	19.0	66	38	54	35
<b>NORTHERN TERRITORY</b>										
Alice Springs . .	252	31	35.2	19.4	21.0	3.8	33	49	26	32
Tennant Creek . .	353	30	36.9	24.1	24.4	10.6	41	36	27	25
<b>SOUTH AUSTRALIA</b>										
Ceduna . .	267	68	27.5	17.0	14.9	6.5	..	..	..	..
Mount Gambier . .	683	192	23.4	13.4	11.9	5.8	65	79	50	69
Oodnadatta . .	112	20	37.2	19.1	22.3	5.9	27	49	17	34
Port Augusta . .	236	62	31.9	17.1	18.5	6.6	50	66	33	52
Port Lincoln . .	462	119	25.2	15.7	14.7	8.0	64	76	53	70
Port Pirie . .	330	78	31.8	16.5	17.0	7.4	51	72	..	..
<b>QUEENSLAND</b>										
Atherton . .	1,372	116	28.8	21.6	18.3	10.0	78	79	..	..
Bundaberg . .	1,077	84	30.0	22.0	20.9	9.6	74	72	63	55
Cairns . .	2,195	140	32.0	25.6	23.4	16.1	77	74	69	63
Charleville . .	457	49	36.4	20.3	21.6	4.5	44	61	28	39
Charters Towers . .	592	59	33.8	24.4	21.8	10.9	65	64	46	47
Cloncurry . .	429	35	37.0	24.7	24.7	10.8	40	40	30	27
Ipswich . .	737	76	32.4	21.1	19.9	6.6	65	65	..	..
Longreach . .	394	37	37.5	22.9	22.9	6.8	49	56	29	35
Mackay . .	1,605	116	30.1	21.7	23.1	11.9	80	77	..	..
Maryborough . .	1,153	122	31.0	21.9	20.4	8.7	73	74	..	..
Normanton . .	955	56	34.6	28.9	25.0	14.8	70	48	52	34
Rockhampton . .	950	93	32.2	23.2	22.4	10.7	68	65	55	45
Roma . .	518	52	34.7	19.7	20.2	4.1	51	64	32	40
Toowoomba . .	894	105	28.2	16.2	16.2	4.8	73	79	..	..
Townsville . .	1,095	75	30.7	24.4	24.6	15.4	75	64	69	59

For footnotes see next page.

CLIMATOLOGICAL DATA FOR SELECTED AUSTRALIAN COUNTRY TOWNS—*continued*

Town	Rainfall		Temperature				Relative humidity			
							Average index of mean relative humidity(a), January	Average index of mean relative humidity(a), July	Mean 3 p.m., January (%)	Mean 3 p.m., July (%)
	Average annual rainfall (mm)	Average number of wet days	Mean maximum, January (°C.)	Mean maximum, July (°C.)	Mean minimum, January (°C.)	Mean minimum, July (°C.)				
NEW SOUTH WALES										
Albury . .	704	99	32.2	13.6	15.4	3.4	47	74	29	64
Armidale . .	737	107	27.1	12.2	13.6	1.0	60	61	44	57
Bega . .	912	80	27.3	17.2	14.1	1.4	72	70	..	..
Bourke . .	297	44	36.7	17.7	20.7	4.9	37	64	24	48
Broken Hill . .	234	46	32.5	15.3	18.1	5.1	36	67	24	49
Cooma . .	480	88	26.0	10.2	11.2	-1.0	55	67	38	56
Dubbo . .	531	72	33.4	15.4	17.7	3.1	48	74	32	56
Goulburn . .	617	112	27.5	11.3	13.4	2.1	59	74	43	67
Grafton . .	881	105	31.7	21.4	19.6	6.6	..	..	..	..
Katoomba . .	1,351	126	23.3	9.1	12.6	2.6	61	71	54	68
Leeton . .	401	78	31.6	13.8	17.3	3.8	44	76	..	..
Moree . .	544	56	35.6	18.2	19.7	3.9	..	..	..	..
Newcastle . .	1,052	132	25.4	16.3	19.2	8.7	74	70	69	61
Orange . .	800	95	28.8	10.9	12.1	-0.3	..	..	..	..
Tamworth . .	620	67	32.8	15.8	17.4	2.7	..	..	..	..
Taree . .	1,207	110	28.8	18.1	16.7	5.6	..	..	..	..
Wagga . .	544	86	32.1	13.9	16.4	3.2	50	77	31	65
Wollongong . .	1,118	112	25.8	16.5	17.0	8.4	78	71	..	..
VICTORIA										
Ballarat . .	696	170	24.3	9.9	10.3	3.6	60	81	41	75
Bendigo . .	516	111	28.3	12.3	13.6	4.1	47	75	30	64
Geelong . .	541	133	24.6	13.6	13.0	5.6	65	81	52	70
Horsham . .	447	104	29.5	13.3	12.9	3.8	50	77	33	67
Mildura . .	264	61	32.1	15.3	16.1	4.7	48	71	..	..
Sale . .	602	128	25.3	13.8	12.4	3.7	65	79	51	68
Seymour . .	564	94	29.3	12.9	12.6	3.0	56	79	..	..
Shepparton . .	506	103	30.2	13.2	14.9	4.1	49	77	32	63
Wangaratta . .	650	104	30.4	12.9	14.7	3.4	41	75	26	66
Warrnambool . .	655	153	21.1	13.1	12.6	6.4	73	83	69	77
TASMANIA										
Burnie . .	988	170	19.8	12.1	11.1	5.9	70	82	65	74
Launceston . .	726	149	24.3	12.1	11.2	2.7	60	77	..	..
Zeehan . .	2,390	246	19.1	10.9	8.9	3.4	73	81	61	74

(a) The average index of mean relative humidity has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the average mean temperature of the month. Being thus related to the mean temperature this value of relative humidity is a good approximation to the daily mean.

NOTE. The table on the next page gives the latitude, longitude, and altitude of the weather recording station at each of the above towns.

## LOCATION CO-ORDINATES FOR SELECTED AUSTRALIAN COUNTRY TOWNS

Station	Lat.	Long.	Altitude (m)	Station	Lat.	Long.	Altitude (m)
Western Australia—				Queensland— <i>contd</i>			
Albany . . .	34° 57'	117° 48'	69	Toowoomba . . .	27° 33'	151° 57'	586
Broome . . .	17° 57'	122° 13'	12	Townsville . . .	19° 15'	146° 46'	3
Bunbury . . .	33° 19'	115° 38'	1	New South Wales—			
Carnarvon . . .	24° 53'	113° 39'	4	Albury . . .	36° 06'	146° 54'	183
Esperance . . .	33° 51'	121° 53'	4	Armidale . . .	30° 32'	151° 38'	980
Geraldton . . .	28° 48'	114° 42'	28	Bega . . .	36° 40'	149° 50'	15
Kalgoorlie . . .	30° 46'	121° 27'	360	Bourke . . .	30° 05'	145° 58'	107
Meekatharra . . .	26° 36'	118° 29'	517	Broken Hill . . .	31° 57'	141° 28'	298
Narrogin . . .	32° 54'	117° 09'	351	Cooma . . .	36° 13'	149° 08'	838
Port Hedland . . .	20° 23'	118° 37'	6	Dubbo . . .	32° 10'	148° 37'	262
Wyndham . . .	15° 31'	128° 09'	6	Goulburn . . .	34° 45'	149° 43'	632
Northern Territory—				Grafton . . .	29° 41'	152° 56'	6
Alice Springs . . .	23° 48'	133° 53'	546	Katoomba . . .	33° 43'	150° 19'	1,000
Tennant Creek . . .	19° 38'	134° 11'	375	Leeton . . .	34° 33'	146° 24'	151
South Australia—				Moree . . .	29° 28'	149° 51'	207
Ceduna . . .	32° 08'	133° 42'	17	Newcastle . . .	32° 55'	151° 49'	37
Mount Gambier . . .	37° 45'	140° 47'	63	Orange . . .	33° 18'	149° 06'	869
Oodnadatta . . .	27° 33'	135° 29'	113	Tamworth . . .	31° 05'	150° 56'	390
Port Augusta . . .	32° 33'	137° 47'	4	Taree . . .	31° 54'	152° 28'	9
Port Lincoln . . .	34° 47'	135° 53'	4	Wagga . . .	35° 08'	147° 25'	219
Port Pirie . . .	33° 11'	138° 01'	3	Wollongong . . .	34° 25'	150° 56'	46
Queensland—				Victoria—			
Atherton . . .	17° 17'	145° 27'	752	Ballarat . . .	37° 35'	143° 50'	437
Bundaberg . . .	24° 52'	152° 21'	2	Bendigo . . .	36° 46'	144° 17'	223
Cairns . . .	16° 35'	145° 44'	3	Geelong . . .	38° 07'	144° 22'	17
Charleville . . .	26° 25'	146° 17'	290	Horsham . . .	36° 40'	142° 12'	133
Charters Towers . . .	20° 03'	146° 08'	306	Mildura . . .	34° 14'	142° 05'	48
Cloncurry . . .	20° 40'	140° 30'	189	Sale . . .	38° 06'	147° 08'	15
Ipswich . . .	27° 38'	152° 44'	20	Seymour . . .	37° 02'	145° 08'	141
Longreach . . .	23° 26'	144° 15'	187	Shepparton . . .	36° 23'	145° 24'	113
Mackay . . .	21° 07'	149° 10'	3	Wangaratta . . .	36° 22'	146° 19'	150
Maryborough . . .	25° 32'	152° 42'	6	Warrnambool . . .	38° 24'	142° 29'	10
Normanton . . .	17° 39'	141° 05'	10	Tasmania—			
Rockhampton . . .	23° 23'	150° 29'	8	Burnie . . .	41° 04'	145° 54'	4
Roma . . .	26° 36'	148° 42'	305	Launceston . . .	41° 33'	147° 13'	166
				Zeehan . . .	41° 54'	145° 23'	180



### The Weather of 1972 (December 1971 to November 1972)

The following is a brief summary of weather conditions experienced during the four seasons ended in November 1972. Plate 3, page 31, shows the rainfall distribution for 1972.

*Summer, 1971-72.* Rainfall was much above average in most of South Australia, Victoria, New South Wales and the east coast of Queensland. The Central Tablelands district of New South Wales recorded its highest summer rainfall on record and other districts in central-eastern New South Wales and central Victoria approached record seasonal falls.

Rainfall was very much below average generally in Western Australia and western Queensland. Notably dry areas were the North Kimberley and Central Coast districts of Western Australia and the lower western district of Queensland.

Elsewhere over the continent and in Tasmania summer rainfall was mainly average.

Temperatures were generally average.

*Autumn, 1972.* Rainfall was significantly below average over most of the continent and in Tasmania. In Western Australia conditions were below average apart from above average falls in the Kimberleys. South Australia, Victoria, New South Wales and Tasmania had a generally dry autumn and rainfall deficiencies were causing concern in some areas.

Queensland had mostly below average rainfall although there were some good falls in parts of the north and the south-east.

The Northern Territory received good rainfall, particularly in the Alice Springs district, which had record falls in March.

Temperatures were average or above. Daily maxima were notably above average in the southern half of Western Australia, South Australia, parts of Victoria and most of Tasmania. Daily minima were notably above average in scattered parts of Western Australia and Queensland.

*Winter 1972.* Rainfall was generally much below average over New South Wales and most of Victoria following a below average autumn. The low winter rainfall resulted in serious rainfall deficiencies over the autumn—winter period in most of inland New South Wales and eastern Victoria; and although useful rain fell at the end of August, follow-up rains were required urgently.

In Western Australia and South Australia, the agricultural areas generally received average rainfall resulting in fair seasonal conditions.

Queensland received below average rainfall and much of the southern inland was suffering from serious deficiencies following a below average autumn.

In Tasmania rainfall was average, or above, and seasonal conditions fair.

Temperatures were mainly average but there were some well below average mean minima over the tablelands of New South Wales. Record low temperatures were experienced in Tasmania in June.

*Spring, 1972.* Widespread heavy rains fell over south-east Queensland and north-east New South Wales with coastal areas receiving up to three times their spring average.

Elsewhere rainfall was below average except for scattered areas above average mainly in Western Australia and Queensland. Many areas of South Australia, western New South Wales, Victoria and north-east Tasmania were up to 50 per cent below average for the season.

Temperatures were appreciably above average. Mean daily maximum temperatures were greater than 1°C above average over most of the interior of the continent, in much of Victoria and in north-east Tasmania. Mean daily minima were greater than 1°C above average over a band of country extending from the north-west coast of the continent across the interior to the east coast.



## CHAPTER 3

# GENERAL GOVERNMENT

### Parliamentary government

#### Scheme of parliamentary government

Under section 1 of the Commonwealth of Australia Constitution the legislative power of the Commonwealth is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate, and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General who, subject to the Constitution of the Commonwealth, has such powers and functions as the Sovereign is pleased to assign to him. In each State there is a State Governor who is the representative of the Sovereign for the State and who exercises such powers within the State as are conferred upon him by the Letters Patent which constitute his office and by the instructions which detail the manner in which his duties are to be fulfilled. The Legislature in each State was bicameral until 1922, when the Queensland Upper House was abolished and the Parliament became unicameral. In the bicameral Parliaments the Upper House is known in the Commonwealth Parliament as the Senate, and in the State Parliaments as the Legislative Council, while the Lower House is known in the Commonwealth Parliament as the House of Representatives, in the State Parliaments of New South Wales, Victoria, and Western Australia as the Legislative Assembly, and in the State Parliaments of South Australia and Tasmania as the House of Assembly. In Queensland the sole legislative chamber is known as the Legislative Assembly. The extent of the Legislative powers of the Parliaments is defined by the Commonwealth and State Constitutions. In those States that have a bicameral legislature the Legislative Assembly or House of Assembly is the larger House. The members of the Legislative Assembly or House of Assembly, as the case may be, of each State are elected by the people, the franchise extending to British subjects who are at least 18 years of age with certain residential qualifications, except in Queensland and Tasmania where persons vote to elect members in both Houses of the respective Parliaments of those States if they are at least 21 years of age. With the exception of the New South Wales Legislative Council, the members of State Legislative Councils are, in common with members of the Lower Houses, elected by the people of the respective States. In New South Wales a quarter of the members of the Legislative Council retire each three years, and the continuing members of the Council and the members of the Legislative Assembly, voting as an electoral body, elect members to fill the vacant positions. In Victoria, and Tasmania members of the Legislative Council are elected by adult suffrage, while the franchise is limited in South Australia to the holders of certain property or service qualifications and their spouses. In the Commonwealth Parliament the qualifications for the franchise are identical for both Houses, extending to British subjects who have lived in Australia for six months continuously and who are at least 18 years of age.\*

#### The Sovereign

On 7 February 1952 the Governor-General and members of the Federal Executive Council proclaimed Princess Elizabeth Queen Elizabeth the Second, Queen of this Realm and of all Her other Realms and Territories, Head of the Commonwealth, Defender of the Faith, Supreme Liege Lady in and over the Commonwealth of Australia. The coronation of Her Majesty in Westminster Abbey took place on 2 June 1953.

#### The Governor-General

*Powers and functions.* As the Queen's representative in Australia, the Governor-General exercises certain prerogative powers and functions assigned to him by the Queen. Other powers and functions are conferred on him by the Constitution. Powers which have been so assigned or conferred include, among others, the power to grant pardons and to remit fines for offences against the laws of the Commonwealth; to appoint certain officers in the Diplomatic or Consular Service of the Commonwealth; to appoint times for holding the sessions of the Parliament, prorogue Parliament, and dissolve the House of Representatives; to cause writs to be issued for general elections of members of the House of Representatives; to assent in the Queen's name to a proposed law passed by both Houses of the Parliament or withhold assent, or to reserve the law for the Queen's pleasure, or to return the proposed law to the House in which it originated and transmit therewith any amendments which he

\* The age qualification for enrolment and voting in both houses of the Commonwealth Parliament was lowered from 21 years to 18 years by Act No. 7 of 1973.



may recommend; to exercise the executive power of the Commonwealth; to choose and summon Executive Councillors, who hold office during his pleasure; and to appoint Ministers of State for the Commonwealth. In addition, the command-in-chief of the defence forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

Many Acts of the Commonwealth Parliament provide that the Governor-General may make regulations to give effect to the Act. The Governor-General may also be authorised by statute to issue proclamations—for example, to declare an Act in force or a state of things to exist, e.g. the calling out of the Citizen Military Forces in time of war or defence emergency. He has been given power by statute to legislate for certain Territories of the Commonwealth. Under the conventions of responsible government obtaining in British Commonwealth countries, the Governor-General's functions are exercised generally on the advice of Ministers of State.

*Holders of office.* The following list shows the names of the Governors-General since the inception of the Commonwealth.

### GOVERNORS-GENERAL

Rt Hon. JOHN ADRIAN LOUIS, EARL OF HOPETOUN (afterwards MARQUIS OF LINLITHGOW), P.C., K.T., G.C.M.G., G.C.V.O. From 1 January 1901 to 9 January 1903.

Rt Hon. HALLAM, BARON TENNYSON, P.C., G.C.M.G. From 17 July 1902 to 9 January 1903 (Acting).

Rt Hon. HALLAM, BARON TENNYSON, P.C., G.C.M.G. From 9 January 1903 to 21 January 1904.

Rt Hon. HENRY STAFFORD, BARON NORTHCOTE, P.C., G.C.M.G., G.C.I.E., C.B. From 21 January 1904 to 9 September 1908.

Rt Hon. WILLIAM HUMBLE, EARL OF DUDLEY, P.C., G.C.B., G.C.M.G., G.C.V.O. From 9 September 1908 to 31 July 1911.

Rt Hon. THOMAS, BARON DENMAN, P.C., G.C.M.G., K.C.V.O. From 31 July 1911 to 18 May 1914.

Rt Hon. SIR RONALD CRAUFURD MUNRO-FERGUSON (afterwards VISCOUNT NOVAR OF RAITH), G.C.M.G. From 18 May 1914 to 6 October 1920.

Rt Hon. HENRY WILLIAM, BARON FORSTER OF LEPE, P.C., G.C.M.G. From 6 October 1920 to 8 October 1925.

Rt Hon. JOHN LAWRENCE, BARON STONEHAVEN (afterwards 1ST VISCOUNT STONEHAVEN), P.C., G.C.M.G., D.S.O. From 8 October 1925 to 22 January 1931.

Rt Hon. SIR ISAAC ALFRED ISAACS, G.C.B., G.C.M.G., K.C. From 22 January 1931 to 23 January 1936.

Brigadier-General the Rt Hon. ALEXANDER GORE ARKWRIGHT, BARON GOWRIE (afterwards 1ST EARL OF GOWRIE), V.C., P.C., G.C.M.G., C.B., D.S.O., K.G.St.J. From 23 January 1936 to 30 January 1945.

His Royal Highness PRINCE HENRY WILLIAM FREDERICK ALBERT, DUKE OF GLOUCESTER, EARL OF ULSTER AND BARON CULLODEN, K.G., P.C., K.T., K.P., G.C.B., G.C.M.G., G.C.V.O., General in the Army, Air Chief Marshal in the Royal Air Force, One of His Majesty's Personal Aides-de-Camp. From 30 January 1945 to 11 March 1947.

Rt Hon. SIR WILLIAM JOHN MCKELL, G.C.M.G., Q.C. From 11 March 1947 to 8 May 1953.

Field Marshal SIR WILLIAM JOSEPH SLIM (afterwards VISCOUNT SLIM OF YARRALUMLA), K.G., G.C.B., G.C.M.G., G.C.V.O., G.B.E., D.S.O., M.C., K.St.J. From 8 May 1953 to 2 February 1960.

Rt Hon. WILLIAM SHEPHERD, VISCOUNT DUNROSSIL, P.C., G.C.M.G., M.C., K.St.J., Q.C. From 2 February 1960 to 3 February 1961.

Rt Hon. WILLIAM PHILIP, VISCOUNT DE LISLE, V.C., P.C., G.C.M.G., G.C.V.O., K.St.J. From 3 August 1961 to 22 September 1965.

Rt Hon. RICHARD GARDINER, BARON CASEY, K.G., P.C., G.C.M.G., C.H., D.S.O., M.C., K.St.J. From 22 September 1965 to 30 April 1969.

Rt Hon. SIR PAUL HASLUCK, G.C.M.G., G.C.V.O., K.St.J. From 30 April 1969.

*Administrators.* In addition to the holders of the office of Governor-General listed above, certain persons have, from time to time, been appointed as Administrator of the Government of the Commonwealth. Administrators are appointed in the event of the death, illness, or absence from Australia of the Governor-General, or for the period between the departure of a Governor-General and the arrival of his successor. The following is a list of such appointments.

### ADMINISTRATORS

Rt Hon. FREDERIC JOHN NAPIER, BARON CHELMSFORD (afterwards 1st VISCOUNT CHELMSFORD), K.C.M.G. From 21 December 1909 to 27 January 1910.

Lieut.-Colonel the Rt Hon. ARTHUR HERBERT TENNYSON, BARON SOMERS, K.C.M.G., D.S.O., M.C. From 3 October 1930 to 22 January 1931.

Captain the Rt Hon. WILLIAM CHARLES ARCEDECKNE, BARON HUNTINGFIELD, K.C.M.G., K.St.J. From 29 March 1938 to 24 September 1938.

Major-General SIR WINSTON JOSEPH DUGAN (afterwards 1st BARON DUGAN OF VICTORIA), G.C.M.G., C.B., D.S.O. From 5 September 1944 to 30 January 1945; 19 January 1947 to 11 March 1947.

General\* SIR JOHN NORTHCOTT, K.C.M.G., K.C.V.O., C.B. From 19 July 1951 to 14 December 1951; 30 July 1956 to 22 October 1956.

General SIR REGINALD ALEXANDER DALLAS BROOKS, K.C.B., K.C.M.G.†, K.C.V.O., D.S.O., K.St.J. From 8 January 1959 to 16 January 1959; 4 February 1961 to 3 August 1961; 5 June 1962 to 3 October 1962; 21 November 1962 to 18 December 1962.

General SIR ERIC WINSLOW WOODWARD, K.C.M.G., K.C.V.O., C.B., C.B.E., D.S.O., K.St.J. From 16 June 1964 to 30 August 1964.

Colonel SIR HENRY ABEL SMITH, K.C.M.G., K.C.V.O., D.S.O., K.St.J. From 7 May 1965 to 22 September 1965.

Lieut.-General SIR EDRIC MONTAGUE BASTYAN, K.C.M.G., K.C.V.O., K.B.E., C.B. From 24 April 1967 to 1 June 1967.

Major-General SIR ROHAN DELACOMBE, K.C.M.G., K.C.V.O., K.B.E., C.B., D.S.O., K.St.J. From 11 February 1971 to 18 February 1971; 12 October 1971 to 19 October 1971; 29 June 1972 to 9 August 1972.

### Governors of the States

*Powers and functions.* The Queen is represented in each of the States by a Governor, the office having been constituted by Letters Patent under the Great Seal of the United Kingdom of various dates. The Governors of the States exercise prerogative powers conferred on them by these Letters Patent, their Commissions of appointment, and the Governor's Instructions given them under the Royal Sign Manual and Signet or other instrument as specified in the Letters Patent. In addition, they have been invested with various statutory functions by State Constitutions and other Imperial Acts and by Acts of the Parliaments of the States.

A Governor of a State assents in the Queen's name to Bills passed by the Parliament of the State, except those reserved for the Royal assent. The latter include certain classes of Bills which are regulated by the Constitution Acts and by the Governor's Instructions. He administers the prerogative of mercy by the reprieve or pardon of criminal offenders within his jurisdiction, and may remit fines and penalties due to the Crown. In the performance of his functions generally, particularly those conferred by Statute, the Governor of a State acts on the advice of Ministers of State for the State.

*Holders of office.* The names of the present (March 1973) State Governors are as follows:

### STATE GOVERNORS, MARCH 1973

*New South Wales*—SIR ARTHUR RODEN CUTLER, V.C., K.C.M.G., K.C.V.O., C.B.E., K.St.J.

*Victoria*—MAJOR-GENERAL SIR ROHAN DELACOMBE, K.C.M.G., K.C.V.O., K.B.E., C.B., D.S.O., K.St.J.

*Queensland*—AIR MARSHAL SIR COLIN THOMAS HANNAH, K.C.M.G., K.B.E., C.B., K.St.J.

*South Australia*—SIR MARK LAURENCE ELWIN OLIPHANT, K.B.E., K.St.J.

*Western Australia*—MAJOR-GENERAL SIR DOUGLAS ANTHONY KENDREW, K.C.M.G., C.B., C.B.E., D.S.O.

*Tasmania*—LIEUT.-GENERAL SIR EDRIC MONTAGUE BASTYAN, K.C.M.G., K.C.V.O., K.B.E., C.B.

### The Cabinet and executive government

Both in the Commonwealth and in the States, executive government is based on the system which was evolved in Britain in the 18th Century, and which is generally known as 'Cabinet' or 'responsible' government. Its essence is that the head of the State (Her Majesty the Queen, and her representative the Governor-General or Governor) should perform governmental acts on the advice of her Ministers;

\* Lieutenant-General Sir John Northcott was granted honorary rank of General while administering the Government of the Commonwealth. † G.C.M.G., 1963.

that she should choose her principal Ministers of State from members of Parliament belonging to the party, or coalition of parties, commanding a majority in the lower House; that the Ministry so chosen should be collectively responsible to that House for the government of the country; and that the Ministry should resign if it ceases to command a majority there.

The Cabinet system operates chiefly by means of constitutional conventions, customs, or understandings, and through institutions that do not form part of the legal structure of the government at all. The Constitutions of the Commonwealth and the States make fuller legal provision for the Cabinet system than the British Constitution does—for example, by requiring that Ministers shall either be, or within a prescribed period become, members of the Legislature. In general, however, the legal structure of the executive government remains the same as it was before the establishment of the Cabinet system.

The executive power of the Commonwealth is exercisable by the Governor-General, and that of the States by the Governor. In each case he is advised by an Executive Council, which, however, meets only for certain formal purposes, as explained below. The whole policy of a Ministry is, in practice, determined by some or all of the Ministers of State, meeting without the Governor-General or Governor under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

*The Cabinet.* This body does not form part of the legal mechanism of government. Its meetings are private and deliberative. The actual Ministers of the day alone are present, no records of the meetings are made public, and the decisions taken have, in themselves, no legal effect. In Australia all Ministers are members of Cabinet\*. As Ministers are the leaders of the party or parties commanding a majority in the lower House, the Cabinet substantially controls, in ordinary circumstances, not only the general legislative programme of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the country. Even in summoning, proroguing, or dissolving Parliament, the Governor-General or Governor is usually guided by the advice tendered him by the Cabinet, through the Prime Minister or Premier, though legally the discretion is vested in the Governor-General or Governor himself.

*The Executive Council.* This body is usually presided over by the Governor-General or Governor the members thereof holding office during his pleasure. All Ministers of State must be members of the Executive Council. In the Commonwealth, and also in the States of Victoria and Tasmania, Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings, for it is an essential feature of the Cabinet system that attendance should be limited to the Ministers of the day. The Meetings of the Executive Council are formal and official in character, and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings the decisions of the Cabinet are, where necessary, given legal form, appointments made, resignations accepted, proclamations issued, and regulations and the like approved.

*The appointment of Ministers.* Legally, Ministers hold office during the pleasure of the Governor-General or Governor. In practice, however, the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. When a Ministry resigns, the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command, a majority in the Lower House, and to commission him, as Prime Minister or Premier, to 'form a Ministry'—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

*Ministers in Upper and Lower Houses.* The following table shows the distribution of Ministers in the Houses of each Parliament in January 1973.

AUSTRALIAN PARLIAMENTS: MINISTERS IN UPPER OR LOWER HOUSES  
JANUARY 1973

<i>Ministers with seats in—</i>	<i>Cwlth</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(a)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
The Upper House .	6	2	4	(b)	3	3		18
The Lower House .	21	16	12	14	7	9	9	88
<b>Total . .</b>	<b>27</b>	<b>18</b>	<b>16</b>	<b>14</b>	<b>10</b>	<b>12</b>	<b>9</b>	<b>106</b>

(a) By the Constitution Act, the number of Ministers was increased to ten in 1970. (b) Abolished in 1922.

\* Between January 1956 and December 1972 the Commonwealth Ministry was made up of twelve senior Ministers, who constituted the Cabinet, and other Ministers of non-cabinet rank who attended meetings of the Cabinet only when required, as for example, when the business of the Cabinet concerned their Departments.



**Commonwealth Ministries**

*Names and tenure of office, 1901 to 1973.* The following list shows the name of each Commonwealth Ministry to hold office since 1 January 1901, and the limits of its term of office.

**COMMONWEALTH MINISTRIES, 1901 TO MARCH 1973**

- (i) BARTON MINISTRY, 1 January 1901 to 24 September 1903.
- (ii) DEAKIN MINISTRY, 24 September 1903 to 27 April 1904.
- (iii) WATSON MINISTRY, 27 April 1904 to 18 August 1904.
- (iv) REID-McLEAN MINISTRY, 18 August 1904 to 5 July 1905.
- (v) DEAKIN MINISTRY, 5 July 1905 to 13 November 1908.
- (vi) FISHER MINISTRY, 13 November 1908 to 2 June 1909.
- (vii) DEAKIN MINISTRY, 2 June 1909 to 29 April 1910.
- (viii) FISHER MINISTRY, 29 April 1910 to 24 June 1913.
- (ix) COOK MINISTRY, 24 June 1913 to 17 September 1914.
- (x) FISHER MINISTRY, 17 September 1914 to 27 October 1915.
- (xi) HUGHES MINISTRY, 27 October 1915 to 14 November 1916.
- (xii) HUGHES MINISTRY, 14 November 1916 to 17 February 1917.
- (xiii) HUGHES MINISTRY, 17 February 1917 to 10 January 1918.
- (xiv) HUGHES MINISTRY, 10 January 1918 to 9 February 1923.
- (xv) BRUCE-PAGE MINISTRY, 9 February 1923 to 22 October 1929.
- (xvi) SCULLIN MINISTRY, 22 October 1929 to 6 January 1932.
- (xvii) LYONS MINISTRY, 6 January 1932 to 7 November 1938.
- (xviii) LYONS MINISTRY, 7 November 1938 to 7 April 1939.
- (xix) PAGE MINISTRY, 7 April 1939 to 26 April 1939.
- (xx) MENZIES MINISTRY, 26 April 1939 to 14 March 1940.
- (xxi) MENZIES MINISTRY, 14 March 1940 to 28 October 1940.
- (xxii) MENZIES MINISTRY, 28 October 1940 to 29 August 1941.
- (xxiii) FADDEN MINISTRY, 29 August 1941 to 7 October 1941.
- (xxiv) CURTIN MINISTRY, 7 October 1941 to 21 September 1943.
- (xxv) CURTIN MINISTRY, 21 September 1943 to 6 July 1945.
- (xxvi) FORDE MINISTRY, 6 July 1945 to 13 July 1945.
- (xxvii) CHIFLEY MINISTRY, 13 July 1945 to 1 November 1946.
- (xxviii) CHIFLEY MINISTRY, 1 November 1946 to 19 December 1949.
- (xxix) MENZIES MINISTRY, 19 December 1949 to 11 May 1951.
- (xxx) MENZIES MINISTRY, 11 May 1951 to 11 January 1956.
- (xxxi) MENZIES MINISTRY, 11 January 1956 to 10 December 1958.
- (xxxii) MENZIES MINISTRY, 10 December 1958 to 18 December 1963.
- (xxxiii) MENZIES MINISTRY, 18 December 1963 to 26 January 1966.
- (xxxiv) HOLT MINISTRY, 26 January 1966 to 14 December 1966.
- (xxxv) HOLT MINISTRY, 14 December 1966 to 19 December 1967.
- (xxxvi) McEWEN MINISTRY, 19 December 1967 to 10 January 1968.
- (xxxvii) GORTON MINISTRY, 10 January 1968 to 28 February 1968.
- (xxxviii) GORTON MINISTRY, 28 February 1968 to 12 November 1969.
- (xxxix) GORTON MINISTRY, 12 November 1969 to 10 March 1971.
- (xl) McMAHON MINISTRY, 10 March 1971 to 5 December 1972.
- (xli) WHITLAM MINISTRY, 5 December 1972 to 19 December 1972.
- (xlii) WHITLAM MINISTRY, 19 December 1972.

*Names of Members of each Ministry to 19 December 1972.* In Year Book No. 17, 1924, the names are given of each Ministry up to the Bruce-Page Ministry (9 February 1923 to 22 October 1929), together with the names of the successive holders of portfolios therein, and issue No. 39 contains a list, commencing with the Bruce-Page Ministry, which covers the period between the date on which it assumed power, 9 February 1923, and 31 July 1951, showing the names of all persons who held office in each Ministry during that period. The names of members of subsequent Ministries are listed in successive issues of the Year Book after No. 39.

This issue shows only particulars of the Second Whitlam Ministry.

### THE WHITLAM MINISTRY—FROM 19 DECEMBER 1972

(The State in which each Minister's electorate is situated is shown in parenthesis. All Ministers are members of the Australian Labor Party and all are in the Cabinet.)

*Prime Minister and Minister for Foreign Affairs—*

THE HON. E. G. WHITLAM, Q.C., M.P.  
(N.S.W.)

*Deputy Prime Minister, Minister for Defence,  
Minister for the Navy, Minister for the Army,  
Minister for Air and Minister for Supply—*

THE HON. L. H. BARNARD, M.P. (Tas.)

*Minister for Overseas Trade and Minister for  
Secondary Industry—*

THE HON. J. F. CAIRNS, M.P. (Vic.)

*Minister for Social Security—*

THE HON. W. G. HAYDEN, M.P. (Qld)

*Treasurer—*

THE HON. F. CREAN, M.P. (Vic.)

*Attorney-General, Minister for Customs and  
Excise and Leader of the Government in the  
Senate—*

SENATOR THE HON. L. K. MURPHY, Q.C.  
(N.S.W.)

*Special Minister of State, Vice-President of the  
Executive Council, Minister assisting the Prime  
Minister and Minister assisting the Minister for  
Foreign Affairs—*

SENATOR THE HON. D. R. WILLESEE (W.A.)

*Minister for the Media—*

SENATOR THE HON. D. MCCLELLAND (N.S.W.)

*Minister for Northern Development—*

THE HON. R. A. PATTERSON, M.P. (Qld)

*Minister for Repatriation and Minister assisting  
the Minister for Defence—*

SENATOR THE HON. R. BISHOP (S.A.)

*Minister for Services and Property and Leader of  
the House—*

THE HON. F. M. DALY, M.P. (N.S.W.)

*Minister for Labour—*

THE HON. C. R. CAMERON, M.P. (S.A.)

*Minister for Urban and Regional Development—*

THE HON. T. UREN, M.P. (N.S.W.)

*Minister for Transport and Minister for Civil  
Aviation—*

THE HON. C. K. JONES, M.P. (N.S.W.)

*Minister for Education—*

THE HON. K. E. BEAZLEY, M.P. (W.A.)

*Minister for Tourism and Recreation and Minister  
assisting the Treasurer—*

THE HON. F. E. STEWART, M.P. (N.S.W.)

*Minister for Works—*

SENATOR THE HON. J. L. CAVANAGH (S.A.)

*Minister for Primary Industry—*

SENATOR THE HON. K. S. WRIEDT (Tas.)

*Minister for Aboriginal Affairs—*

THE HON. G. M. BRYANT, E.D., M.P. (Vic.)

*Minister for Minerals and Energy—*

THE HON. R. F. X. CONNOR, M.P. (N.S.W.)

*Minister for Immigration—*

THE HON. A. J. GRASSBY, M.P. (N.S.W.)

*Minister for Housing—*

THE HON. L. R. JOHNSON, M.P. (N.S.W.)

*Minister for the Capital Territory and Minister  
for the Northern Territory*

THE HON. K. E. ENDERBY, M.P. (A.C.T.)

*Postmaster-General—*

THE HON. L. F. BOWEN, M.P. (N.S.W.)

*Minister for Health—*

THE HON. D. N. EVERINGHAM, M.P. (Qld)

*Minister for the Environment and Conservation—*

THE HON. M. H. CASS, M.P. (Vic.)

*Minister for Science and Minister for External  
Territories—*

THE HON. W. L. MORRISON, M.P. (N.S.W.)

*Names of Ministers of State.* Year Book No. 38 contains a statement listing the Commonwealth Departments in existence during the period 1 April 1925 to 31 December 1949 and the names of the Ministers of State who had administered them (pages 74-9). This is in continuation of a similar statement covering the period from the inauguration of the Commonwealth Government to 1925 which appears in Year Book No. 18.

### State Premiers, March 1973

The names of the Premiers of each State in March 1973 are shown below.

#### STATE PREMIERS, MARCH 1973†

*New South Wales*—The Hon. Sir Robert Askin, K.C.M.G., M.L.A. (L.P.)

*Victoria*—The Hon. R. J. Hamer, E.D., M.P. (L.P.)

*Queensland*—The Hon. J. Bjelke-Petersen, M.L.A. (C.P.)

*South Australia*—The Hon. D. A. Dunstan, Q.C., M.P. (A.L.P.)

*Western Australia*—The Hon. J. T. Tonkin, M.L.A. (A.L.P.)

*Tasmania*—The Hon. E. E. Reece, M.H.A. (A.L.P.)

### Leaders of the Opposition, Commonwealth and State Parliaments, March 1973

The Leader of the Opposition plays an important part in the Party system of government which operates in the Australian Parliaments. The following list gives the names of the holders of this position in each of the Parliaments in March 1973.

#### LEADERS OF THE OPPOSITION, MARCH 1973†

*Commonwealth*—Rt Hon. B. M. Snedden, Q.C., M.P. (L.P.)

*New South Wales*—P. D. Hills, M.L.A. (A.L.P.)

*Victoria*—A. C. Holding, M.P. (A.L.P.)

*Queensland*—J. W. Houston, M.L.A. (A.L.P.)

*South Australia*—Dr B. C. Eastick, M.P. (L.C.L.)

*Western Australia*—The Hon. Sir Charles Court, O.B.E., M.L.A. (L.P.)

*Tasmania*—The Hon. E. M. Bingham, M.H.A. (L.P.)

### Numbers and salaries of Commonwealth Ministers

Under sections 65 and 66, respectively, of the Constitution of the Commonwealth the number of Ministers of State was not to exceed seven, and the annual sum payable for their salaries was not to exceed £12,000 (\$24,000), each provision to operate, however, 'until the Parliament otherwise provides'.

Subsequently the number and salaries have been increased from time to time, and from April 1973 the annual sum payable for salaries has been fixed at \$302,000 and the number of Ministers at twenty-seven. An additional ministerial allowance of \$10,900 a year is payable to the Prime Minister, and an additional ministerial allowance of \$5,200 a year to the Deputy Prime Minister and \$4,875 a year to other Ministers.

All amounts payable in the foregoing paragraphs are in addition to amounts payable as Parliamentary allowances (see page 75).

## Parliaments and elections

### The Commonwealth Parliaments

The first Parliament of the Commonwealth was convened by proclamation dated 29 April 1901 by His Excellency the Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9 May 1901 by H.R.H. the Duke of Cornwall and York. The Rt Hon. Sir Edmund Barton, G.C.M.G., K.C., was Prime Minister.

The following table shows the number and duration of Parliaments since federation.

† Full titles of party abbreviations are shown on page 74.



## COMMONWEALTH PARLIAMENTS

<i>Number of Parliament</i>	<i>Date of opening</i>	<i>Date of dissolution</i>
First . . . .	9 May 1901 . . .	23 November 1903
Second . . . .	2 March 1904 . . .	5 November 1906
Third . . . .	20 February 1907 . . .	19 February 1910
Fourth . . . .	1 July 1910 . . .	23 April 1913
Fifth . . . .	9 July 1913 . . .	30 July 1914(a)
Sixth . . . .	8 October 1914 . . .	26 March 1917
Seventh . . . .	14 June 1917 . . .	3 November 1919
Eighth . . . .	26 February 1920 . . .	6 November 1922
Ninth . . . .	28 February 1923 . . .	3 October 1925
Tenth . . . .	13 January 1926 . . .	9 October 1928
Eleventh . . . .	6 February 1929 . . .	16 September 1929
Twelfth . . . .	20 November 1929 . . .	27 November 1931
Thirteenth . . . .	17 February 1932 . . .	7 August 1934
Fourteenth . . . .	23 October 1934 . . .	21 September 1937
Fifteenth . . . .	30 November 1937 . . .	27 August 1940
Sixteenth . . . .	20 November 1940 . . .	7 July 1943
Seventeenth . . . .	23 September 1943 . . .	16 August 1946
Eighteenth . . . .	6 November 1946 . . .	31 October 1949
Nineteenth . . . .	22 February 1950 . . .	19 March 1951(a)
Twentieth . . . .	12 June 1951 . . .	21 April 1954
Twenty-first . . . .	4 August 1954 . . .	4 November 1955
Twenty-second . . . .	15 February 1956 . . .	14 October 1958
Twenty-third . . . .	17 February 1959 . . .	2 November 1961
Twenty-fourth . . . .	20 February 1962 . . .	1 November 1963
Twenty-fifth . . . .	25 February 1964 . . .	31 October 1966
Twenty-sixth . . . .	21 February 1967 . . .	29 September 1969
Twenty-seventh . . . .	25 November 1969 . . .	2 November 1972
Twenty-eighth . . . .	27 February 1973 . . .	

(a) A dissolution of both the Senate and the House of Representatives was granted by the Governor-General, acting on the advice of the Cabinet and under section 57 of the Constitution.

There have been twenty-seven complete Parliaments since Federation. Until 1927 the Parliament met in Melbourne; it now meets in Canberra, the first meeting at Parliament House, Canberra, being opened by the Duke of York on 9 May 1927.

The twenty-seventh Parliament opened on 25 November, 1969 and ended on 2 November, 1972 when the House of Representatives was dissolved. Elections for the House of Representatives were held on 2 December, 1972. Elections were also held on the same date to fill a casual vacancy in the Senate for the State of Queensland. Particulars of electors and voting are given on page 70. For particulars of electors enrolled and of electors who voted in the several States and Territories at previous Commonwealth elections, *see* Year Book No. 58 and earlier issues.

A special article describing the Commonwealth Parliament, its functions and procedure, prepared by the Clerk of the Senate and the Clerk of the House of Representatives, appears in Year Book No. 49, pages 65-71.

### Qualifications for membership and for franchise—Commonwealth Parliament

Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any British subject, eighteen\* years of age or over and not disqualified on other grounds, who has resided in the Commonwealth for at least three years and who is, or is qualified to become an elector of the Commonwealth. Qualifications for Commonwealth franchise are possessed by any British subject, not under eighteen\* years of age and not disqualified on other grounds, who has lived in Australia for six months continuously. Residence in a Subdivision for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory except that the compulsory enrolment provisions do not relate to an Aboriginal native of Australia. A member of the Defence Force on service outside Australia who is not less than eighteen\* years of age, is a British subject and has lived in Australia for six months continuously is entitled to vote at Commonwealth elections even though he may not be enrolled.

\* The age for candidature and the franchise age were lowered from 21 years to 18 years by Act No. 7 of 1973.

The principal reasons for disqualification of persons otherwise eligible for election as members of either Commonwealth House are: membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding an office of profit under the Crown (with certain exceptions), or having pecuniary interest in any agreement with the public service of the Commonwealth except as a member of an incorporated company of more than twenty-five persons. Persons of unsound mind, attainted of treason, convicted and under sentence for any offence punishable by imprisonment for one year or longer, or persons who are holders of temporary entry permits under the *Migration Act* 1958–1966 or are prohibited immigrants under that Act are excluded from the franchise. In the main, these or similar grounds for disqualification apply also to State Parliament membership and franchise. Aborigines are entitled to enrol and to vote at both Commonwealth and State elections in all States.

### Commonwealth Parliaments and elections

From the establishment of the Commonwealth until 1949 the Senate consisted of thirty-six members, six being returned by each of the original federating States. The Constitution empowers Parliament to increase or decrease the size of the Parliament, and, as the population of the Commonwealth had more than doubled since its inception, the Parliament passed the *Representation Act* 1948 which provided that there should be ten Senators from each State instead of six, increasing the total to sixty Senators, thus enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation.

In accordance with the Constitution the total number of members of the House of Representatives must be as nearly as practicable double that of the Senate.\* Consequently, in terms of the Constitution and the Representation Act, from the date of the 1949 elections the number of members in the House of Representatives was increased from 74 to 121 (excluding the members for the internal Territories). As the States are represented in the House of Representatives on a population basis, the numbers were increased as follows: New South Wales—from 28 to 47; Victoria—from 20 to 33, Queensland—from 10 to 18; South Australia—from 6 to 10; and Western Australia—from 5 to 8. Tasmania's representation remained at 5 (the Constitution provides for a minimum of 5 members for each Original State). The increase in the number of members of Parliament necessitated a redistribution of seats and a redetermination of electoral boundaries. Redistributions are carried out by distribution commissioners appointed for each State. The redistributions are effected on a quota basis, but taking into account community interests, means of communication, physical features, existing boundaries, and other factors.

The population as disclosed by the Census taken on 30 June 1954 necessitated a further alteration in representation in the House of Representatives in respect of New South Wales, South Australia, and Western Australia. Representation as from the general election for the House of Representatives on 10 December 1955 was: New South Wales 46, Victoria 33, Queensland 18, South Australia 11, Western Australia 9, Tasmania 5, the total number of members (excluding the members for the internal Territories) being increased from 121 to 122.

The population as disclosed by the Census taken on 30 June 1961 revealed that, under the provisions of the Representation Act, New South Wales, Queensland, and Western Australia would each lose one member in the House of Representatives, while Victoria would gain a member. The distribution commissioners' reports were duly laid before both Houses of Parliament, but the Government decided not to proceed with the proposals and announced that it would amend the Representation Act. In November 1964 the formula provided by Section 10 of the Representation Act for determining the number of members of the House of Representatives was amended so as to give a State an additional member for 'any portion of a quota'. The effect of that amendment would have been that at the next redistribution Victoria and South Australia would each gain one member while all other States would retain their existing representation. However, no fresh redistribution was effected prior to the 1966 Census. Consequent upon the population changes disclosed by the Census taken on 30 June 1966, a redistribution of the State electoral division boundaries was carried out in 1968 and the following representation in the House of Representatives became effective as from the general election held on 25 October 1969: New South Wales 45, Victoria 34, Queensland 18, South Australia 12, Western Australia 9 and Tasmania 5, the total number of members (excluding the members for the internal Territories) being increased from 122 to 123.

The population as disclosed by the Census taken on 30 June 1971 revealed that, under the provisions of the Representation Act, Western Australia will gain an additional member of the House of Representatives as from the next general elections following a redistribution of the electoral boundaries in that State.

\* A proposal to alter the Constitution so that numbers of members of the House of Representatives might be increased without necessarily increasing the number of Senators was the subject of a referendum in March 1967, but was rejected. See Year Book No. 54, page 66, for results of the Referendum.

Since the general election of 1922 the Northern Territory has been represented by one member in the House of Representatives, and the Australian Capital Territory has had similar representation since the elections of 1949. The member for the Australian Capital Territory has had full voting rights since the first sitting of the twenty-sixth Parliament. In May 1968 the Northern Territory Representation Act was amended to give full voting rights to the Member for the Northern Territory effective from 15 May 1968, the day on which the Act received Royal Assent.

Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. At elections for Senators the whole State constitutes the electorate. For the purpose of elections for the House of Representatives the State is divided into single electorates corresponding in number to the number of members to which the State is entitled. Further information regarding the Senate and the House of Representatives is given in earlier issues of the Year Book.

The *Commonwealth Electoral Act* 1948, enacted with the *Representation Act* 1948 which enlarged the Commonwealth Parliament (*see* page 69), changed the system of scrutiny and counting of votes in Senate elections from the alternative vote to that of proportional representation. For a description of the system, *see* Year Book No. 38, pages 82–3. The method of voting for both the Senate and the House of Representatives is preferential.

Particulars of voting at Senate elections and elections for the House of Representatives up to 1969 appear in earlier issues of the Year Book, and additional information is available in the *Statistical Returns* issued by the Chief Electoral Officer following each election and printed as Parliamentary Papers.

The numbers of electors and primary votes cast for the major political parties in each State and Territory at the latest election for each House were as follows.

### COMMONWEALTH ELECTIONS, 1970 AND 1972

Votes recorded										
State or Territory	Electors enrolled	Liberal Party of Aus- tralia	Aus- tralian Country Party	Aus- tralian Labor Party	Aus- tralian Demo- cratic Labor Party	Aus- tralia Party	Others	Informal	Total	
HOUSE OF REPRESENTATIVES ELECTION, 2 DECEMBER 1972										
New South Wales.	2,581,069	722,937	235,132	1,252,047	84,322	80,662	36,492	46,750	2,458,342	
Victoria . . .	1,929,354	606,273	134,158	854,201	150,824	38,743	22,331	43,456	1,849,986	
Queensland . .	1,022,022	242,752	187,057	449,620	53,319	15,741	4,412	19,440	972,341	
South Australia .	671,081	259,341	13,991	317,646	23,052	6,418	6,918	16,845	644,211	
Western Australia.	537,240	193,060	40,831	226,398	22,054	5,618	3,008	13,328	504,297	
Tasmania . . .	219,644	73,166	..	123,814	10,086	1,076	1,915	3,393	213,450	
Northern Territory	29,929	..	11,657	9,676	..	1,129	2,170	1,176	25,808	
Australian Capital Territory . . .	83,591	17,556	..	40,147	2,758	10,529	6,013	1,806	78,809	
Australia . . .	7,073,930	2,115,085	622,826	3,273,549	346,415	159,916	83,259	146,194	6,747,244	

### SENATE ELECTION, 21 NOVEMBER 1970

New South Wales .	2,455,958	786,229	939,721	144,544	113,174	80,798	231,345	2,295,811	
Victoria .	1,848,117	588,817	565,098	294,413	45,093	50,689	198,865	1,742,975	
Queensland .	958,449	311,905	350,034	136,850	..	36,039	64,652	899,480	
South Australia .	639,807	233,054	251,117	17,902	5,076	59,813	42,306	609,268	
Western Australia .	497,066	109,890	59,416	184,648	23,938	..	49,944	35,162	462,998
Tasmania .	212,345	59,712	85,597	7,495	..	37,827	12,600	203,231	
Australia .	6,611,742	2,149,023	2,376,215	625,142	163,343	315,110	584,930	6,213,763	

### House of Representatives Election, 2 December 1972

Membership at the beginning of 1973 was: *Senate*—Australian Labor Party, 26; Liberal Party of Australia, 21; Australian Country Party, 5; Australian Democratic Labor Party, 5; Independent, 3; *House of Representatives*—Australian Labor Party, 67; Liberal Party of Australia, 38; Australian Country Party, 20.



# Members of the Commonwealth Parliament

The following is a list of Senators and Members of the House of Representatives of the Commonwealth Parliament as at 1 January 1973. Changes since that date are set out in the Appendix to this volume. Party affiliation is indicated by the use of the following abbreviations:

- A.D.L.P.—Australian Democratic Labor Party
- A.L.P.—Australian Labor Party
- C.P.—Australian Country Party
- Ind.—Independent
- L.P.—Liberal Party of Australia

## MEMBERS OF THE COMMONWEALTH PARLIAMENT, 1 JANUARY 1973(a)

### THE SENATE

*President:*

SENATOR THE HON. SIR MAGNUS CAMERON CORMACK, K.B.E.

*Chairman of Committees:*

SENATOR E. W. PROWSE

*Leader of the Government in the Senate:*

SENATOR THE HON. L. K. MURPHY, Q.C.

*Leader of the Opposition in the Senate:*

SENATOR R. G. WITHERS

<i>Senator</i>	<i>State</i>	<i>Term(b) expires 30 June</i>	<i>Senator</i>	<i>State</i>	<i>Term(b) expires 30 June</i>
Anderson, Hon. Sir Kenneth K.B.E., (L.P.)	N.S.W.	1977	Laucke, C. L. (L.P.)	S.A.	1974
Bishop, Hon. R. (A.L.P.)	S.A.	1974	Lawrie, A. G. E. (C.P.)	Qld	1977
Bonner, N. T. (L.P.)	Qld	1974	Lillico, A. E. D. (L.P.)	Tas.	1977
Brown, W. W. C. (A.L.P.)	Vic.	1977	Little, J. A. (A.D.L.P.)	Vic.	1974
Buttfield, Dame Nancy D.B.E. (L.P.)	S.A.	1974	McAuliffe, R. E. (A.L.P.)	Qld	1977
Byrne, C. B. (A.D.L.P.)	Qld	1974	McClelland, Hon. D. (A.L.P.)	N.S.W.	1974
Cameron, D.N. (A.L.P.)	S.A.	1977	McClelland, J. R. (A.L.P.)	N.S.W.	1977
Cant, H.G.J. (A.L.P.)	W.A.	1977	McLaren, G. T. (A.L.P.)	S.A.	1977
Carrick, J. L. (L.P.)	N.S.W.	1977	McManus, F. P. (A.D.L.P.)	Vic.	1977
Cavanagh, Hon. J. L. (A.L.P.)	S.A.	1974	Marriott, Hon. J. E. (L.P.)	Tas.	1977
Cormack, Hon. Sir Magnus K.B.E. (L.P.)	Vic.	1974	Maunsell, C. R. (C.P.)	Qld	1974
Cotton, Hon. R. C. (L.P.)	N.S.W.	1974	Milliner, B. R. (A.L.P.)	Qld	1974
Davidson, G. S. (L.P.)	S.A.	1977	Mulvihill, J. A. (A.L.P.)	N.S.W.	1977
Devitt, D. M. (A.L.P.)	Tas.	1977	Murphy, Hon. L. K., Q.C., (A.L.P.)	N.S.W.	1974
Drake-Brockman, Hon. T. C., D.F.C. (C.P.)	W.A.	1977	Negus, S. A. (Ind.)	W.A.	1977
Drury, A. J. (A.L.P.)	S.A.	1977	O'Byrne, J. (A.L.P.)	Tas.	1977
Durack, P. D. (L.P.)	W.A.	1977	Poke, A. G. (A.L.P.)	Tas.	1974
Fitzgerald, J. F. (A.L.P.)	N.S.W.	1974	Poyser, A. G. (A.L.P.)	Vic.	1974
Gair, Hon. V. C. (A.D.L.P.)	Qld	1977	Primmer, C. G. (A.L.P.)	Vic.	1977
Georges, G. (A.L.P.)	Qld	1974	Prowse, E. W. (C.P.)	W.A.	1974
Gietzelt, A. T. (A.L.P.)	N.S.W.	1977	Rae, P. E. (L.P.)	Tas.	1974
Greenwood, Hon. I. J., Q.C. (L.P.)	Vic.	1977	Sim, J. P. (L.P.)	W.A.	1974
Guilfoyle, Margaret G. C. (L.P.)	Vic.	1977	Townley, M. (Ind.)	Tas.	1977
Hannan, G. C. (L.P.)	Vic.	1974	Turnbull, R. J. D. (Ind.)	Tas.	1974
Jessop, D. S. (L.P.)	S.A.	1977	Webster, J. J. (C.P.)	Vic.	1974
Kane, J. T. (A.D.L.P.)	N.S.W.	1974	Wheeldon, J. M. (A.L.P.)	W.A.	1977
Keefe, J. B. (A.L.P.)	Qld	1977	Wilkinson, L. D. (A.L.P.)	W.A.	1974
			Willesee, Hon. D. R. (A.L.P.)	W.A.	1974
			Withers, R. G. (L.P.)	W.A.	1974
			Wood, I. A. C. (L.P.)	Qld	1977
			Wriedt, Hon. K. S. (A.L.P.)	Tas.	1974
			Wright, Hon. R. C. (L.P.)	Tas.	1974
			Young, H. W. (L.P.)	S.A.	1974

(a) For later changes see Appendix. (b) Senators are elected for a term of six years on a rotational basis; the terms of half the Senators expire every third year.

## MEMBERS OF THE COMMONWEALTH PARLIAMENT

1 JANUARY 1973(a)—continued

THE HOUSE OF REPRESENTATIVES  
(Triennial Parliaments—Last General Election  
2 December 1972)*Speaker:*

THE HON. J. F. COPE, M.P.

*Chairman of Committees:*

G. G. D. SCHOLDS, M.P.

*Leader of the House:*

THE HON. F. M. DALY, M.P.

*Leader of the Opposition:*

THE RT HON. B. M. SNEDDEN, Q.C., M.P.

<i>Member</i>	<i>Division</i>	<i>Member</i>	<i>Division</i>
Adermann, A. E. (C.P.) .	Fisher (Q.)	Daly, Hon. F. M. (A.L.P.)	Grayndler (N.S.W.)
Anthony, Rt Hon. J. D. (C.P.)	Richmond (N.S.W.)	Davies, R. (A.L.P.) .	Braddon (T.)
Armitage, J. L. (A.L.P.) .	Chifley (N.S.W.)	Doyle, F. E. (A.L.P.) .	Lilley (Q.)
Ashley-Brown, A. (A.L.P.)	Mitchell (N.S.W.)	Drummond, P. H. (L.P.)	Forrest (W.A.)
Barnard, Hon. L. H. (A.L.P.)	Bass (T.)	Drury, E. N., C.B.E.	Ryan (Q.)
Beazley, Hon. K. E. (A.L.P.)	Fremantle (W.A.)	Duthie, G. W. A. (A.L.P.)	Wilmot (T.)
Bennett, A. F. (A.L.P.) .	Swan (W.A.)	Edwards, H. R. (L.P.) .	Berowra (N.S.W.)
Berinson, J. M. (A.L.P.)	Perth (W.A.)	Enderby, Hon. K. E. (A.L.P.)	Australian Capital Territory
Birrell, F. R. (A.L.P.) .	Port Adelaide (S.A.)	England, J. A., E.D. (C.P.)	Calare (N.S.W.)
Bourchier, J. W. (L.P.) .	Bendigo (V.)	Erwin, Hon. G. D. (L.P.)	Ballaarat (V.)
Bonnett, R. N. (L.P.) .	Herbert (Q.)	Everingham, Hon. D. N. (A.L.P.)	Capricornia (Q.)
Bowen, Hon. L. F. (A.L.P.)	Kingsford-Smith (N.S.W.)	Fairbairn, Hon. D. E., D.F.C. (L.P.)	Farrer (N.S.W.)
Bowen, Hon. N. H., Q.C. (L.P.)	Parramatta (N.S.W.)	Fisher, P. S. (C.P.) .	Mallee (V.)
Bryant, Hon. G. M., E.D. (A.L.P.)	Wills (V.)	FitzPatrick, J. (A.L.P.) .	Darling (N.S.W.)
Bury, Hon. L. H. E. (L.P.)	Wentworth (N.S.W.)	Forbes, Hon. A. J., M.C. (L.P.)	Barker (S.A.)
Cairns, Hon. J. F. (A.L.P.)	Lalor (V.)	Fox, E. M. C., C.B.E. (L.P.)	Henty (V.)
Calder, S. E., D.F.C. (C.P.)	Northern Territory	Fraser, Hon. J. M. (L.P.)	Wannon (V.)
Cameron, Hon. C. R. (A.L.P.)	Hindmarsh (S.A.)	Fulton, W. J. (A.L.P.) .	Leichhardt (Q.)
Cameron, D. M. (L.P.) .	Griffith (Q.)	Garland, Hon. R. V. (L.P.)	Curtin (W.A.)
Cass, Hon. M. H. (A.L.P.)	Maribyrnong (V.)	Garrick, H. J. (A.L.P.) .	Batman (V.)
Chipp, Hon. D. L. (L.P.)	Hotham (V.)	Giles, G. O'H. (L.P.) .	Angas (S.A.)
Coates, J. (A.L.P.) .	Denison (T.)	Gorton, Rt Hon. J. G., C.H. (L.P.)	Higgins (V.)
Cohen, B. (A.L.P.) .	Robertson (N.S.W.)	Graham, B. W. (L.P.) .	North Sydney (N.S.W.)
Collard, F. W. (A.L.P.) .	Kalgoorlie (W.A.)	Grassby, Hon. A. J. (A.L.P.)	Riverina (N.S.W.)
Connor, Hon. R. F. X. (A.L.P.)	Cunningham (N.S.W.)	Gun, R. T. (A.L.P.) .	Kingston (S.A.)
Cooke, N. M. (L.P.) .	Petrie (Q.)	Hallett, J. M. (C.P.) .	Canning (W.A.)
Cope, Hon. J. F. (A.L.P.)	Sydney (N.S.W.)	Hamer, D. J., D.S.C. (L.P.)	Isaacs (V.)
Corbett, J. (C.P.) .	Maranoa (Q.)	Hansen, B. P. (A.L.P.) .	Wide Bay (Q.)
Cramer, Hon. Sir John (L.P.)	Bennelong (N.S.W.)	Hayden, Hon. W. G. (A.L.P.)	Oxley (Q.)
Crean, Hon. F. (A.L.P.) .	Melbourne Ports (V.)	Hewson, H. A. (C.P.) .	McMillan (V.)
Cross, M. D. (A.L.P.) .	Brisbane (Q.)	Holten, Hon. R. McN. (C.P.)	Indi (V.)

(a) For later changes see Appendix.

MEMBERS OF THE COMMONWEALTH PARLIAMENT  
1 JANUARY 1973(a)—continued  
THE HOUSE OF REPRESENTATIVES—continued

<i>Member</i>	<i>Division</i>	<i>Member</i>	<i>Division</i>
Hunt, Hon. R. J. D. (C.P.)	Gwydir (N.S.W.)	Nicholls, M. H. (A.L.P.)	Bonython (S.A.)
Hurford, C. J. (A.L.P.)	Adelaide (S.A.)	Nixon, Hon. P. J. (C.P.)	Gippsland (V.)
Innes, U. E. (A.L.P.)	Melbourne (V.)	O'Keefe, F. L. (C.P.)	Paterson (N.S.W.)
Jacobi, R. (A.L.P.)	Hawker (S.A.)	Oldmeadow, M. W. (A.L.P.)	Holt (V.)
James, A. W. (A.L.P.)	Hunter (N.S.W.)	Olley, F. (A.L.P.)	Hume (N.S.W.)
Jarman, A. W. (L.P.)	Deakin (V.)	Patterson, Hon. R. A. (A.L.P.)	Dawson (Q.)
Jenkins, H. A. (A.L.P.)	Scullin (V.)	Peacock, Hon. A. S. (L.P.)	Kooyong (V.)
Johnson, L. K. (A.L.P.)	Burke (V.)	Reynolds, L. J. (A.L.P.)	Barton (N.S.W.)
Johnson, Hon. L. R. (A.L.P.)	Hughes (N.S.W.)	Riordan, J. M. (A.L.P.)	Phillip (N.S.W.)
Jones, Hon. C. K. (A.L.P.)	Newcastle (N.S.W.)	Robinson, E. L. (L.P.)	McPherson (Q.)
Katter, Hon. R. C. (C.P.)	Kennedy (Q.)	Robinson, Hon. I. L. (C.P.)	Cowper (N.S.W.)
Keating, P. J. (A.L.P.)	Blaxland (N.S.W.)	Scholes, G. G. D. (A.L.P.)	Corio (V.)
Kelly, Hon. C. R. (L.P.)	Wakefield (S.A.)	Sherry, R. H. (A.L.P.)	Franklin (T.)
Keogh, L. J. (A.L.P.)	Bowman (Q.)	Sinclair, Hon. I. McC. (C.P.)	New England (N.S.W.)
Kerin, J. C., (A.L.P.)	Macarthur (N.S.W.)	Snedden, Rt Hon. B. M. Q.C. (L.P.)	Bruce (V.)
Killen, Hon. D. J. (L.P.)	Moreton (Q.)	Staley, A. A. (L.P.)	Chisholm (V.)
King, Hon. R. S. (C.P.)	Wimmera (V.)	Stewart Hon. F. E. (A.L.P.)	Lang (N.S.W.)
Klugman, R. E. (A.L.P.)	Prospect (N.S.W.)	Street, Hon. A. A. (L.P.)	Corangamite (V.)
Lamb, A. H. (A.L.P.)	LaTrobe (V.)	Thorburn, R. W. (A.L.P.)	Cook (N.S.W.)
Lloyd, B. (C.P.)	Murray (V.)	Turner, H. B. (L.P.)	Bradfield (N.S.W.)
Luchetti, A. S. (A.L.P.)	Macquarie (N.S.W.)	Uren, Hon. T. (A.L.P.)	Reid (N.S.W.)
Lucock, P.E., C.B.E. (C.P.)	Lyne (N.S.W.)	Viner, R. I. (L.P.)	Stirling (W.A.)
Lynch, Hon. P. R. (L.P.)	Flinders (V.)	Wallis, L.G. (A.L.P.)	Grey (S.A.)
MacKellar, M. J. R. (L.P.)	Warringah (N.S.W.)	Wentworth, Hon. W. C. (L.P.)	Mackellar (N.S.W.)
McKenzie, D. C. (A.L.P.)	Diamond Valley (V.)	Whan, R. B. (A.L.P.)	Eden-Monaro (N.S.W.)
McLeay, Hon. J. E. (L.P.)	Boothby (S.A.)	Whitlam, Hon. E. G., Q.C., (A.L.P.)	Werriwa (N.S.W.)
McMahon, Rt Hon. W., C.H. (L.P.)	Lowe (N.S.W.)	Whittorn, R. H., C.B.E. (L.P.)	Balaclava (V.)
McVeigh, D. T. (C.P.)	Darling Downs (Q.)	Willis, R. (A.L.P.)	Gellibrand (V.)
Maisey, D. W. (C.P.)	Moore (W.A.)	Wilson, I. B. C. (L.P.)	Sturt (S.A.)
Martin, V. J. (A.L.P.)	Banks (N.S.W.)		
Mathews, C. R. T. (A.L.P.)	Casey (V.)		
Morris, P. F. (A.L.P.)	Shortland (N.S.W.)		
Morrison, Hon. W. L. (A.L.P.)	St George (N.S.W.)		
Mulder, A. W. (A.L.P.)	Evans (N.S.W.)		

(a) For later changes see Appendix.

Commonwealth referendums

In accordance with section 128 of the Constitution any proposed law for the alteration of the Constitution, in addition to being passed by an absolute majority of each House of Parliament, must be submitted to a referendum of the electors in each State, and must be approved by a majority of the electors in a majority of the States and also by a majority of all the electors who voted, before it can be presented for Royal Assent. Twenty-six such proposals have so far been submitted to referendums and the consent of the electors has been received in five cases, the first in relation to the election of Senators in 1906, the second and third in respect of State Debts—one in 1910 and the other in 1928, the fourth in respect of Social Services in 1946, and the fifth in respect of Aborigines in 1967. In addition to referendums for alterations of the Constitution, other Commonwealth referendums have been held, two prior to Federation regarding the proposed Constitution and two regarding military service during the 1914–1918 War. For details of earlier referendums see Year Book No. 52, pages 66–8.



On 1 March 1967 two Bills were introduced in the House of Representatives to alter the Constitution, one to enable the number of members of the House of Representatives to be increased without necessarily increasing the number of Senators, the other to enable the Aboriginal people to be counted in reckoning the population and to omit certain words relating to the Aboriginal race which some people felt were discriminatory. The proposed laws, after being passed by both Houses of Parliament, were submitted to the electors of the States at referendums held on 27 May 1967. At the referendums the electors voted in all States in favour of the proposal regarding Aboriginals, but rejected in all States but New South Wales the proposal for increasing the number of members of the House of Representatives. For a summary of the results of the voting on each of the proposals *see* Year Book No. 54, page 66.

Consequent upon obtaining the approval of the electors, an Act cited as the *Constitution Alteration (Aboriginals)* 1967 was assented to on 10 August 1967. Section 51 of the Constitution was thereby altered by omitting from paragraph (xxvi) the words 'other than the aboriginal race in any State', and Section 127 of the Constitution was thereby repealed.

### The Parliaments of the States

This chapter contains summarised information on the Parliaments of each State, the numbers of Houses and members, and salaries payable. For greater detail, including some historical material, reference should be made to earlier Year Books, particularly No. 50, pages 69-72. Recent changes have been reported in successive issues of the Year Book.

*Membership of State Parliaments.* The following table shows the party distribution in each of the various State Parliaments at the beginning of 1973.

#### STATE PARLIAMENTS: MEMBERSHIP, BY PARTY AFFILIATION, 1 JANUARY 1973

<i>Party</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>
UPPER HOUSE						
Australian Country Party (C.P.) .	12	7	..	..	7	..
Australian Labor Party (A.L.P.) .	25	9	..	4	10	2
Independent (Ind.) . . . .	5	..	..	..	..	(a)17
Liberal and Country League (L.C.L.)	..	..	..	16	..	..
Liberal Party of Australia (L.P.) .	18	20	..	..	(b)13	..
<b>Total . . . . .</b>	<b>60</b>	<b>36</b>	<b>(d)</b>	<b>20</b>	<b>30</b>	<b>19</b>
LOWER HOUSE						
Australian Country Party (C.P.) .	16	8	26	..	7	..
Australian Labor Party (A.L.P.) .	45	22	33	27	26	21
Independent (Ind.) . . . .	3	..	1	..	..	..
Independent Labor (Ind. Lab.) .	..	1	..	..	..	..
Liberal and Country League (L.C.L.)	..	..	..	20	..	..
Liberal Party of Australia (L.P.) .	31	42	21	..	(b)18	14
North Queensland Labor Party (N.Q.L.P.) . . . . .	..	..	1	..	..	..
Vacancy . . . . .	1	..	..	..	..	..
<b>Total . . . . .</b>	<b>96</b>	<b>73</b>	<b>82</b>	<b>47</b>	<b>51</b>	<b>35</b>

(a) In Legislative Council elections only the A.L.P. normally endorses candidates. (b) Formerly Liberal and Country League, which changed its name on 15 July 1968 to The Liberal Party of Australia (Western Australian Division) Incorporated. (c) To be filled in March 1972. (d) Upper House abolished in 1922.

The Australian Country Party: Queensland, and the Country Party of Western Australia are shown above as the Australian Country Party, since they are affiliated with the Federal body.

For corresponding particulars for the Commonwealth Parliament, *see* page 70.

## Number and salary of members of the legislatures, Australian Parliaments, January 1973

## AUSTRALIAN PARLIAMENTS: MEMBERS AND ANNUAL SALARIES, 1 JANUARY 1973

Members in—	Cwltth	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
NUMBER OF MEMBERS								
Upper House . .	60	60	36	(a)	20	30	19	225
Lower House . .	125	96	73	82	47	51	35	509
Total . .	185	156	109	82	67	81	54	734

ANNUAL SALARY  
(\$)

Upper House . .	(b)14,500	(c)4,000	(d)9,300	(a)	(e)9,250	(f)10,104	(g)7,200	..
Lower House . .	(b)14,500	(h)11,500	(d)9,300	(i)10,600	(e)9,250	(f)10,104	(g)7,200	..

(a) Abolished in 1922. (b) As at 1 April 1973. Plus expense allowances—Senators and Members of the House of Representatives, \$4,100. Certain additional allowances are also provided for holders of parliamentary offices, etc. (c) Plus allowance of \$2,000. An additional \$20 per day is payable to members who live outside the metropolitan area. (d) Plus allowances from \$2,400 for metropolitan to \$2,875 for urban, \$3,350 for inner country, and \$3,725 for outer country electorates. (e) Plus an allowance varying from \$1,500 to \$3,200 according to location of electorate. (f) Plus expense reimbursement ranging from \$2,000 for a metropolitan member to \$4,100 for a north province member. (g) Plus allowance according to area of electorate and distance from the capital varying from \$650 to \$1,475 in the case of the Legislative Council, and from \$1,100 to \$2,500 in the case of the House of Assembly. (h) Plus allowance varying from \$2,750 to \$4,100 according to location of electorate. (i) Plus individual electoral allowances ranging from \$1,750 to \$4,000.

## Outlay on parliamentary government

The table below shows, in broad groups, the expenditure incurred in the operation of the parliamentary system in Australia, comprising the Governor-General and Governors, the Ministries, the Upper and Lower Houses of Parliament, and electoral activities; it does not attempt to cover the expenditure on Commonwealth and State administration generally. Only broad groups are shown, but even these are not entirely comparable because of differences in accounting procedures and in the presentation of accounts. Expenditure under the head of Governor-General or Governor includes salaries of Government House staffs and maintenance of residences, official establishments, grounds, etc., and expenditure on capital works and services.

OUTLAY ON PARLIAMENTARY GOVERNMENT, 1971-72  
(\$'000)

Expenditure group	Cwltth	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Governor-General or Governor(a)	563	293	274	233	265	128	162	1,918
Ministry(b) . . . .	798	463	403	201	242	307	243	2,658
Parliament—								
Upper House(c) . . . .	928	404	417	..	206	404	175	2,533
Lower House(c) . . . .	1,877	1,214	795	913	474	522	259	6,053
Both Houses(d) . . . .	5,991	1,550	1,163	644	898	867	271	11,383
Miscellaneous(e) . . . .	4,555	386	148	105	139	58	54	5,445
Total, Parliament . . . .	13,351	3,553	2,522	1,661	1,717	1,850	759	25,414
Electoral(f) . . . . .	3,245	198	101	619	151	195	149	4,658
Royal Commissions, Select Committees, etc . . . . .	474	12	175	3	61	6	14	745
Grand Total . . . . .	18,432	4,520	3,475	2,717	2,436	2,486	1,327	35,393

(a) Salaries and other expenses, including maintenance of house and grounds. (b) Salaries, travelling and other expenses as ministers. (c) Allowances to members (including ministers' salaries as members), travelling and other expenses. (d) Government contribution to members' superannuation funds, printing, reporting staff, library, etc. (e) Services, furniture, stores, etc. (f) Salaries, cost of elections, etc.

## OUTLAY ON PARLIAMENTARY GOVERNMENT, 1967-68 TO 1971-72

<i>Year</i>	<i>Cwth</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
TOTAL (\$'000)								
1967-68	12,457	3,379	2,297	1,590	1,568	1,800	929	24,020
1968-69	13,047	3,163	2,688	2,048	1,581	1,766	1,063	25,356
1969-70	15,602	4,062	3,349	1,974	1,757	1,889	1,035	29,668
1970-71	18,064	4,299	3,883	2,082	2,356	2,305	1,249	34,239
1971-72	18,432	4,520	3,475	2,717	2,436	2,486	1,327	35,393
PER HEAD OF POPULATION (\$)								
1967-68	1.05	0.78	0.70	0.93	1.41	2.01	2.46	2.02
1968-69	1.07	0.72	0.80	1.17	1.40	1.89	2.78	2.09
1969-70	1.26	0.90	0.98	1.11	1.53	1.94	2.68	2.39
1970-71	1.43	0.94	1.12	1.15	2.02	2.27	3.21	2.71
1971-72	1.43	0.97	0.98	1.47	2.06	2.38	3.38	2.74

## Commonwealth Government Departments

In Year Book No. 49 (pages 87-98) a list appears of the Commonwealth Government Departments, giving particulars of each Department, as at the end of 1962, of the principal matters dealt with and the Acts administered by the Minister concerned. Changes made during 1963 and 1966 are shown, respectively, on page 83 of Year Book No. 50 and page 74 of Year Book No. 53. Changes made during 1968 are shown in the Appendix to Year Book No. 54 (pages 1276-7). When the second Whitlam Ministry was constituted in December 1972, various departments were abolished and others established. These changes were notified in Commonwealth of Australia Gazettes No. 129A of 1972 and No. 30 of 1973. Matters dealt with by Commonwealth Government Departments are listed in the paragraphs below. For detailed information on the Acts administered, the functions and the organisation of the Departments and Agencies of the Commonwealth Government *see* the *Australian Government Directory* (latest issue 1973).

**The Department of Aboriginal Affairs—**

Matters related to the Aboriginal people of Australia

The development and administration of national policies for the advancement and welfare of the Aboriginal people, including the administration of welfare activities in the Territories

Special laws for the Aboriginal people

**The Department of Air—**

Air defence

**The Department of the Army—**

Military defence

**The Attorney-General's Department—**

Law and justice

Law enforcement

Human rights

Civil liberties

Legal drafting

Bankruptcy and insolvency

**The Attorney-General's Department—continued**

Bills of exchange and promissory notes

Divorce and matrimonial causes; and in relation thereto, parental rights, and the custody and guardianship of infants

Copyrights

Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth

Marriage

Recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States

Service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States

Censorship

Police forces of the Northern Territory of Australia, the Australian Capital Territory and Norfolk Island



**The Department of the Capital Territory—**

Administration of the Australian Capital Territory, the Jervis Bay Territory, Norfolk Island and the Coral Sea Islands Territory

**The Department of Civil Aviation—**

Civil Aviation

**The Department of Customs and Excise—**

Duties of customs and excise  
Bounties on the production or export of goods

**The Department of Defence—**

Defence policy, including co-ordination and direction of its execution by the Department of the Navy, the Department of the Army, the Department of Air and the Department of Supply  
Civil defence

**The Department of Education—**

Education, including education in the Northern Territory of Australia, the Australian Capital Territory and Norfolk Island

**The Department of the Environment and Conservation—**

Activities related to—  
Environment and conservation—  
Water, including the protection and use of water resources  
National parks

**The Department of External Territories—**

Matters related to the Territory of Papua, the Territory of New Guinea, the Territory of Cocos (Keeling) Islands and the Territory of Christmas Island

**The Department of Foreign Affairs—**

External affairs, including—  
Treaties  
Relations and communications with overseas governments  
Diplomatic and consular missions

**The Department of Health—**

Public health, including—  
Hospitals  
Community health and dental services  
Research  
Preventive medicine  
Pharmaceutical benefits  
Quarantine  
Health services in the Northern Territory of Australia, the Australian Capital Territory and Norfolk Island

**The Department of Housing—**

Housing  
Provision of hostel accommodation in the Australian Capital Territory and for immigrants

**The Department of Immigration—**

Immigration and emigration  
Nationality  
Naturalization and aliens

**The Department of Labour—**

Industrial relations, including conciliation and arbitration in relation to industrial disputes  
Commonwealth Employment Service  
Re-instatement in civil employment of national servicemen, members of the Reserve Forces and members of the Citizen Forces

**The Department of the Media—**

Matters related to the news, information and entertainment media  
Film-making and development of the film industry  
Government publicity and information  
Government printing, publishing and advertising

**The Department of Minerals and Energy—**

Evaluation and balanced development of mineral and energy resources having regard to future requirements  
Geodetic surveying, and the production of topographical maps, for Commonwealth purposes

**The Department of the Navy—**

Naval defence

**The Department of Northern Development—**

In respect of the part of Australia north of the parallel 26 degrees south latitude—  
Matters related to the specialised development and utilisation of natural resources, being land, water and minerals  
Matters related to the production and marketing of sugar and beef, and the production, processing and export of minerals  
Specialised transport development projects, including beef and development roads, mining, railways and mineral port facilities

In relation to the foregoing—

The undertaking or support of research  
The planning or initiation of projects  
The co-ordination of activities in respect of projects  
Co-operation with the States and other authorities

**The Department of the Northern Territory—**

Administration of the Northern Territory of Australia and the Territory of Ashmore and Cartier Islands

**The Department of Overseas Trade—**

Trade and commerce with other countries, including—  
 Trade promotion  
 Trade agreements  
 Export services

**The Postmaster-General's Department—**

Postal, telegraphic, telephonic, and other like services

**The Department of Primary Industry—**

Agricultural and pastoral industries  
 Fisheries  
 Forestry

**The Department of the Prime Minister and Cabinet—**

Administrative and policy advising for the Prime Minister  
 Assistance to the Prime Minister in connexion with co-ordination of government administration  
 Administration of the Cabinet Office  
 Communications between Commonwealth and State Governments  
 Support for the Arts and Letters  
 National Gallery  
 Honours and awards  
 Government hospitality and ceremonial  
 Relations and communications with the Commonwealth Secretariat in London

**The Repatriation Department—**

Repatriation and other benefits for members of the Defence Force and their dependants

**The Department of Science—**

Science and technology, including research and support of research  
 Meteorology  
 Ionospheric Prediction Service  
 Patents of inventions and designs, and trade marks  
 Weights and measures  
 National standards

**The Department of Secondary Industry—**

Secondary industry, including—  
 The efficiency and development of industries  
 Research

**The Department of Services and Property—**

Elections and referendums  
 Provision of accommodation, staff and other facilities for members of the Parliament other than in Parliament House  
 Acquisition and leasing of land and property in Australia or elsewhere for Commonwealth purposes; management and disposal of property so acquired or leased  
 Land, engineering and topographical surveys for Commonwealth purposes

**The Department of Social Security—**

National social security schemes, including—  
 Invalid and age pensions, maternity allowances, widows' pensions, child endowment, unemployment and sickness benefits  
 Health benefits schemes  
 National superannuation  
 National compensation  
 National rehabilitation service  
 Aged persons' homes  
 Assistance for sheltered workshops and handicapped children

**The Department of the Special Minister of State—**

National archives  
 National Library  
 Royal charters  
 War graves  
 Grants to national organisations  
 World expositions  
 Commonwealth Gazette and Commonwealth Directory

**The Department of Supply—**

Defence research and development, including support of space research programs of international organisations  
 Supply, manufacture and procurement of goods and services, including munitions and aircraft for defence  
 Disposal of surplus goods  
 Government transport and storage facilities in the States and storage and transport of goods in the Australian Capital Territory

**The Department of Tourism and Recreation—**

Promotion of tourism in Australia and between other countries and Australia  
 Regulation of the tourist industry  
 Recreation, sport and physical culture

**The Department of Transport—**

Navigation and shipping  
 Lighthouses, lightships, beacons and buoys  
 Land transport  
 Shipbuilding

**The Department of the Treasury—**

Fiscal policy and monetary policy  
 Accounting for public moneys; budgeting  
 Taxation  
 Borrowing money on the public credit of the Commonwealth  
 Banking  
 Insurance  
 Currency, coinage and legal tender  
 Foreign exchange  
 Census and statistics

**The Department of Urban and Regional Development—**

Matters related to city and regional planning and development, including assistance to, and co-operation with, the States and local-governing bodies

**The Department of Works—**

Planning, execution and maintenance of Commonwealth works

Design, provision and maintenance of furniture, furnishings and fittings for the Commonwealth

Promotion of national standards in relation to building construction

## Enactments of the Parliaments

In the Commonwealth all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution. In the States other than South Australia and Tasmania laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly. In South Australia and Tasmania laws are enacted in the name of the Governor of the State, with the advice and consent of the Parliament in the case of South Australia, and of the Legislative Council and House of Assembly in the case of Tasmania. Generally, assent to Bills passed by the legislatures is given by the Governor-General or State Governor acting on behalf of, and in the name of, the Sovereign. In certain special cases Bills are reserved for the Royal assent. The Parliaments of the States are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States in all cases whatsoever. Subject to certain limitations they may alter, repeal, or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth the latter prevails, and the former is to the extent of the inconsistency invalid.

**The course of Commonwealth legislation**

The actual legislation by the Commonwealth Parliament during 1972 is indicated in alphabetical order in *The Acts of the Parliament of the Commonwealth of Australia passed during the year 1972 in the Second Session of the Twenty-seventh Parliament of the Commonwealth, with Appendix, Tables and Index*. A chronological table of Acts passed from 1901 to 1972 showing how they are affected by subsequent legislation or lapse of time is also given, and, further, a table of Commonwealth legislation passed from 1901 to 1972 in relation to the several provisions of the Constitution is furnished in the same volume. Reference should be made to these for complete information.

The Acts passed by the Commonwealth Parliament during the year 1972 are listed on pages 79–84. In many cases the title of the Act indicates the general scope of the Act, but brief explanatory notes have been added where necessary. Appropriate chapters of this Year Book should be referred to for further information which may be available there.

The following figures indicate the variation over the years in the number of enactments of the Commonwealth Parliament since 1901. Seventeen Acts were passed in 1901, 36 in 1914, 38 in 1927, 87 in 1939, 109 in 1952, 156 in 1965, 157 in 1968, 137 in 1971 and 139 in 1972.

*Commonwealth legislation passed during 1972*

*Aged Persons Homes Act 1972* (No. 84) doubled the rate of subsidy payable to eligible organisations providing personal care for the frail aged in hostel accommodation.

*Aged Persons Hostels Act 1972* (No. 76) assisted the provision of additional hostel-type accommodation for aged persons.

*Agricultural Tractors Bounty Act 1972* (No. 71) extended the operation of the *Agricultural Tractors Bounty Act 1966–1970* for a period of 6 months to 31 December 1972.

*Air Navigation (Charges) Act 1972* (No. 100) increased rates of air navigation charges and introduced charges for airline training flights.

*Airline Equipment (Loan Guarantee) Act 1972* (No. 42) guaranteed loans raised by Ansett Transport Industries Ltd, to finance the purchase of 4 Boeing 727-200 series aircraft.

*Airline Agreements Act 1972* (No. 129) amended the *Australian National Airlines Act 1945–1970* to increase the salaries limit above which the approval of the Minister for Civil Aviation is required.

*Apple and Pear Stabilisation Act 1972* (No. 106) raised the maximum tonnage of export apples and pears eligible for payment at the maximum rate under the stabilisation scheme.



*Commonwealth legislation passed during 1972—continued**Appropriation Act (No. 4) 1971–72 (No. 40)**Appropriation Act (No. 5) 1971–72 (No. 41)**Appropriation Act (No. 1) 1972–73 (No. 104)**Appropriation Act (No. 2) 1972–73 (No. 105)**Asian Development Bank (Additional Subscription) Act 1972 (No. 60)* enabled Australia to take up an increase of \$US127.5 in its capital subscription to the Asian Development Bank.*Australian Capital Territory Evidence (Temporary Provisions) Act 1972 (No. 10)* extended for 12 months the operation of the *Australian Capital Territory Evidence (Temporary Provisions) Act 1971*.*Australian Capital Territory Stamp Duty Act 1972 (No. 68)* amended the *Australian Capital Territory Stamp Duty Act 1971* by the omission of provisions that become redundant on the enactment of the *Consular Privileges and Immunities Act 1972 (No. 62)*.*Australian Capital Territory Stamp Duty Act (No. 2) 1972 (No. 94)* increased the rate of stamp duty in the Australian Capital Territory.*Australian Capital Territory Tax (Purchases of Marketable Securities) Act 1972 (No. 93)* increased the rates at which stamp duty is imposed under the 'broker return' system on the purchase side of transactions in marketable securities.*Australian Capital Territory Tax (Sales of Marketable Securities) Act 1972 (No. 92)* raised the rate of duty payable by the selling broker.*Australian Institute of Marine Science Act 1972 (No. 55)* repealed the previous Act and permitted the Institute to carry out research into marine science and to publish the results of that research.*Australian National Airlines Act 1972 (No. 130)* extended the Government's 2-airline policy and the obligations placed on the major airlines as a pre-requisite to the extension.*Banks (Shareholdings) Act 1971 (No. 2)* introduced a control on the acquisition by local and overseas interests of large shareholdings in banks incorporated in Australia.*Broadcasting and Television Act 1972 (No. 49)* required all advertisements on radio or television for cigarettes or cigarette tobacco to be followed by an announcement warning of health dangers.*Butter Fat Levy Act 1972 (No. 34)* amended the *Butter Fat Levy Act 1965–1966* by repealing sections of the previous Act relating to levies for research purposes.*Child Care Act 1972 (No. 121)* provided assistance for the development of child day care facilities of good quality throughout the Commonwealth.*Commonwealth Teaching Service Act 1972 (No. 13)* established a Commonwealth Teaching Service.*Companies (Foreign Take-overs) Act 1972 (No. 134)* controlled the foreign takeovers of companies.*Compensation (Commonwealth Employees) Act 1972 (No. 122)* amended the *Compensation (Commonwealth Employees) Act 1971* to provide for the payment of compensation at the rate of full sick pay, up to 26 weeks, to Commonwealth employees during total incapacity following a compensatable injury.*Conciliation and Arbitration Act 1972 (No. 37)* amended the *Conciliation and Arbitration Act* to provide for the orderly conduct of industrial relations.*Consular Privileges and Immunities Act 1972 (No. 62)* gave effect in Australia to the Vienna Convention on Consular Relations which provides a comprehensive code of international conduct on consular relations.*Crimes (Hijacking of Aircraft) Act 1972 (No. 101)* created the offence of hijacking in respect of aircraft and provided the necessary procedures with respect to the taking of offenders into custody and their detention pending a decision to try them or extradite them.*Customs Tariff Act 1972 (No. 4)**Customs Tariff Act (No. 2) 1972 (No. 18)**Customs Tariff Act (No. 3) 1972 (No. 63)**Customs Tariff Act (No. 4) 1972 (No. 135)**Customs Tariff Act (No. 5) 1972 (No. 136)**Customs Tariff Validation Act 1972 (No. 51)**Customs Tariff Validation Act (No. 2) 1972 (No. 137)*

*Commonwealth legislation passed during 1972—continued*

*Dairy Produce Export Control Act 1972* (No. 3) amended the *Dairy Produce Export Control Act 1924–1966*, by providing the Australian Dairy Produce Board with investment powers related to its present day needs and circumstances.

*Dairy Produce Sales Promotion Act 1972* (No. 33) repealed Part II of the *Dairy Produce Research and Sales Promotion Act 1958–1965*.

*Dairying Industry Act 1972* (No. 35) extended the previous legislation to provide for payment of bounty on the production of butter, cheese and other related products containing butter fat for a further 5 years ending on 30 June 1977.

*Dairying Research Act 1972* (No. 30) widened the existing Commonwealth industry dairy research scheme so that it will apply to the industry as a whole.

*Dairying Research Levy Act 1972* (No. 31) authorised the imposition of levies on whole milk and butter fat.

*Dairying Research Levy Collection Act 1972* (No. 32) provided the machinery necessary for the collection of the levies imposed by the *Dairying Research Levy Act 1972*.

*Delivered Meals Subsidy Act 1972* (No. 113) increased the assistance to Meals on Wheels organisations.

*Diesel Fuel Tax Act* (No. 1) 1972 (No. 26) converted the rate of tax imposed by the Act on diesel fuel entered for home consumption to its metric equivalent.

*Diesel Fuel Tax Act* (No. 2) 1972 (No. 27) converted the rate of duty imposed by the Act on diesel fuel entered for home consumption to its metric equivalent.

*Diplomatic Privileges and Immunities Act 1972* (No. 69) amended the 1967 Act where necessary to maintain conformity with the provisions of the *Consular Privileges and Immunities Act 1972*, to regulate duty and tax free entry of goods.

*Distillation Act 1972* (No. 24) provided for the measuring by volume the alcohol content of liquors and other minor amendments to the Act relating to the introduction of the metric system.

*Estate Duty Assessment Act 1972* (No. 95) doubled the exemption limits for estate duty.

*Excise Act 1972* (No. 23) amended the *Excise Act 1901–1968* by converting existing references to measurement to metric equivalents.

*Excise Tariff Act 1972* (No. 22) represented the initial step towards the progressive implementation of the metric system of weights and measures in Australia.

*Excise Tariff Act* (No. 2) 1972 (No. 64) amended the excise tariff legislation by the omission of provisions that became redundant on the enactment of the *Consular Privileges and Immunities Legislation*.

*Excise Tariff Act* (No. 3) 1972 (No. 119) reduced excise duty on wine and permitted the delivery free of excise duty, of tobacco, cigars, cigarettes and snuff for use in medical or scientific research.

*Excise Tariff Validation Act 1972* (No. 120) validated excise duty collected on wine at the reduced rate of duty as stated in *Excise Tariff Act* (No. 3) 1972 (No. 119).

*Export Payments Insurance Corporation Act 1972* (No. 88) increased the capital of the Export Payments Insurance Corporation.

*Extradition (Commonwealth Countries) Act 1972* (No. 102) made the offence of hijacking in respect of aircraft an extradition crime for the purposes of the *Extradition (Commonwealth Countries) Act 1966–1968*.

*Extradition (Foreign States) Act 1972* (No. 103) made the offence of hijacking in respect of aircraft an extradition crime for the purposes of the *Extradition (Foreign States) Act 1966–1968*.

*Gift Duty Act 1972* (No. 96) raised the gift duty exemption limit.

*Gift Duty Assessment Act 1972* (No. 97) raised the amounts of gifts requiring a return.

*Gold Mining Industry Assistance Act 1972* (No. 52) amended the *Gold Mining Industry Assistance Act* by increasing the subsidy rate and extended its period of operation until June 1975.

*Home Savings Grants Act 1972* (No. 78) amended the *Home Savings Grants Act 1964–1971* making larger grants available.

*Honey Industry Act 1972* (No. 11) amended the *Honey Industry Act 1962–1966* to provide for some changes in the method of appointing industry members to the Australian Honey Board.

*Commonwealth legislation passed during 1972—continued*

*Income Tax Act 1972* (No. 86).

*Income Tax Assessment Act 1972* (No. 5)

*Income Tax Assessment Act* (No. 2) 1972 (No. 46)

*Income Tax Assessment Act* (No. 3) 1972 (No. 47)

*Income Tax Assessment Act* (No. 4) 1972 (No. 65)

*Income Tax Assessment Act* (No. 5) 1972 (No. 85)

*Income Tax (International Agreements) Act 1972* (No. 48)

*Income Tax (Reduction of Additional Tax) Act 1972* (No. 12)

*Industrial Research and Development Grants Act 1972* (No. 59) extended and amended the provisions of the *Industrial Research and Development Grants Act 1967*.

*Lighthouses Act 1972* (No. 61) provided for the deletion of Papua New Guinea from the *Lighthouses Act* from a date to be proclaimed according to the wishes of the Administrator's Executive Council of Papua New Guinea.

*Loan (Australian National Airlines Commission) Act 1972* (No. 43) approved Commonwealth borrowings to assist in financing the purchase of four Boeing 727-200 jet aircraft by the Australian National Airlines Commission—Trans-Australia Airlines.

*Loan (Australian Wheat Board) Act 1972* (No. 9) enabled the Commonwealth to meet its obligation under a guarantee of repayment of certain borrowings by the Australian Wheat Board from the Reserve Bank of Australia in respect of wheat from the 1970-71 pool.

*Loan (Qantas Airways Limited) Act 1972* (No. 98) approved borrowings by the Commonwealth to assist Qantas Airways Ltd in the purchase of a sixth Boeing 747 jet aircraft.

*Loan (War Service Land Settlement) Act 1972* (No. 91) provided for the raising of loan moneys for war service land settlement in South Australia, Western Australia and Tasmania.

*Metal Working Machine Tools Bounty Act 1972* (No. 115) provided for the payment of bounty on various classes of machine tools.

*Navigation Act 1972* (No. 28) inserted in the Navigation Act power to make regulations for the measurement of ship's tonnage in the way provided in the tonnage mark scheme.

*National Health Act 1972* (No. 114) provided further benefits for pensioners in nursing homes, a new fund benefit for patients in nursing homes and aid for persons providing nursing care for elderly relatives.

*National Urban and Regional Development Authority Act 1972* (No. 117) set up a new authority to work with the States towards urban and regional development.

*Native Members of the Forces Benefits Act 1972* (No. 138) removed the limitations between the war compensation benefits for which Torres Strait Islanders and certain mainland Aborigines are eligible and those for which other Australian ex-servicemen are eligible.

*New Guinea Timber Agreement (Repeal) Act 1972* (No. 73) repealed the *New Guinea Timber Agreement Act* of 1952 and 1953.

*Nitrogenous Fertilisers Subsidy Act 1972* (No. 107) extended the subsidy of nitrogenous fertilisers until 31 December 1974, changed the basis for eligibility for the subsidy and expressed the subsidy rate in metric terms.

*Northern Territory (Administration) Act 1972* (No. 39) widened the Conciliation and Arbitration Commission's jurisdiction.

*Ordinances and Regulations (Notification) Act 1972* (No. 75) made effective the ordinances of all the Territories of the Commonwealth and also the regulations, rules or other instruments under a law of the Commonwealth or a Territory of the Commonwealth.

*Papua New Guinea Act 1972* (No. 74) removed the limitation on the number of offices of Minister of the House of Assembly for Papua New Guinea.

*Papua New Guinea Loan (Asian Development Bank) Act 1972* (No. 19) provided a guarantee by the Commonwealth to a borrowing by the Administration of Papua New Guinea from the Asian Development Bank.

*Papua New Guinea Loan (International Bank) Act 1972* (No. 56) provided a guarantee by the Commonwealth to a borrowing by the Administration of Papua New Guinea from the International Bank for Reconstruction and Development.



*Commonwealth legislation passed during 1972—continued*

*Pay-Roll Tax (Territories) Assessment Act 1972* (No. 66) amended the Territories Pay-Roll Tax legislation by the omission of provisions that became redundant on the enactment of the Consular Privileges and Immunities legislation.

*Pollution of the Sea by Oil Act 1972* (No. 131) amended the *Pollution of the Sea by Oil Act 1960–1965* to incorporate amendments adopted by the Assembly of the Inter-Government Maritime Consultative Organisation.

*Pollution of the Sea by Oil (Shipping Levy) Act 1972* (No. 132) covered the costs attached to combating pollution of the sea by oil from ships.

*Pollution of the Sea by Oil (Shipping Levy Collection) Act 1972* (No. 133) provided for the collection of the levy imposed on certain ships carrying oil.

*Processed Milk Products Bounty Act 1972* (No. 36) extended until 30 June 1977 the operations of the *Processed Milk Products Bounty Act*.

*Public Service Act 1972* (No. 6) amended section 50 of the *Public Service Act 1922–1968* and provided for the establishment of central promotions appeal committees.

*Public Service Arbitration Act 1972* (No. 17) provided for the Public Service arbitration tribunal to deal with industrial situations i.e., strikes, bans or limitations on work engaged in by officers or employees of Commonwealth departments or instrumentalities.

*Public Works Committee Act 1972* (No. 57) increased the standing appropriation in the *Public Works Committee Act 1969*.

*Queensland Grant Act 1972* (No. 29) authorised the payment of a special advance grant to Queensland in 1971–72.

*Repatriation Act 1972* (No. 15) increased repatriation, war compensation and war service pensions.

*Repatriation Act (No. 2) 1972* (No. 82) provided a number of improvements in repatriation benefits.

*Repatriation (Far East Strategic Reserve) Act 1972* (No. 81) extended eligibility for war pensions to student children between the ages of 16 and 21 years.

*Repatriation (Special Overseas Service) Act 1972* (No. 80) extended eligibility for war pensions to student children between the ages of 16 and 21 years.

*Repatriation (Torres Strait Islanders) Act 1972* (No. 139) preserved the rights of ex-servicemen, formerly members of the Torres Strait Light Infantry Forces, who will now be brought under the provisions of the *Repatriation Act*.

*Restrictive Trade Practices Act 1972* (No. 118) amended Part XII of the *Restrictive Trade Practices Act 1971* to enable the Australian Shippers' Council to undertake all negotiations with ship-owners and conferences operating in all Australian export liner trades.

*Sales Tax (Exemptions and Classifications) Act 1972* (No. 67) amended the Sales Tax Legislation by the omission of provisions that became redundant on the enactment of the Consular Privileges and Immunities legislation.

*Sales Tax (Exemptions and Classifications) Act (No. 2) 1972* (No. 87) exempted imported works of art from sales tax.

*Seamen's Compensation Act 1972* (No. 124) increased various rates and amounts of workers compensation payable in respect of seamen and their dependants.

*Seamen's War Pensions and Allowances Act 1972* (No. 16) increased the various rates of pensions in relation to seamen.

*Seamen's War Pensions and Allowances Act (No. 2) 1972* (No. 83) increased the various rates of war pensions in relation to seamen.

*Seat of Government (Administration) Act 1972* (No. 38) related to the application of the *Conciliation and Arbitration Act* to industrial disputes in the Australian Capital Territory.

*Social Services Act 1972* (No. 1) increased unemployment benefits and associated short-term sickness and special benefits.

*Social Services Act (No. 2) 1972* (No. 14) increased age, invalid and widow's pensions, long-term sickness benefits and sheltered employment allowances.

*Social Services Act (No. 3) 1972* (No. 53) enabled certain Australian pensions to be paid overseas.

*Social Services Act (No. 4) 1972* (No. 79) increased pensions and introduced a wife's pension.

*Commonwealth legislation passed during 1972—continued*

*Softwood Forestry Agreements Act* 1972 (No. 89) provided for a continuation of financial assistance for a further 5 years from 1 July 1971 to the States for the purpose of expanding the rate of softwood plantings.

*Spirits Act* 1972 (No. 25) provided for the measuring by volume the alcohol content of liquors and other minor amendments to the Act relating to the introduction of the metric system.

*States Grants (Aboriginal Advancement) Act* 1972 (No. 99).

*States Grants Act* 1972 (No. 20).

*States Grants Act (No. 2)* 1972 (No. 90)

*States Grants (Advanced Education) Act* 1972 (No. 58).

*States Grants (Advanced Education) Act (No. 2)* 1972 (No. 127).

*States Grants (Advanced Education) Act (No. 3)* 1972 (No. 128).

*States Grants (Capital Assistance) Act* 1972 (No. 8).

*States Grants (Capital Assistance) Act (No. 2)* 1972 (No. 21).

*States Grants (Capital Assistance) Act (No. 3)* 1972 (No. 77).

*States Grants (Fruit Growing Reconstruction) Act* 1972, (No. 112).

*States Grants (Independent Schools) Act* 1972 (No. 7).

*States Grants (Independent Schools) Act (No. 2)* 1972 (No. 109)

*States Grants (Pre-school Teachers Colleges) Act* 1972 (No. 72).

*States Grants (Schools) Act* 1972 (No. 108).

*States Grants (Special Assistance) Act* 1972 (No. 116).

*States Grants (Universities) Act* 1972 (No. 125).

*States Grants (Universities) Act (No. 2)* 1972 (No. 126).

*Stevedoring Industry (Temporary Provisions) Act* 1972 (No. 54) extended the operation of the *Stevedoring Industry (Temporary Provisions) Act* 1967–1971 for a further period of 12 months.

*Supply Act (No. 1)* 1972–73 (No. 44).

*Supply Act (No. 2)* 1972–73 (No. 45).

*Tariff Board Act* 1972 (No. 50) amended the previous act to enable the Tariff Board to comprise 11 instead of the present 9 members.

*United States Naval Communication Station (Civilian Employees) Act* 1972 (No. 123) amended the *United States Naval Communication Station (Civilian Employees) Act* 1971 to enable the new compensation rate of full sick pay during total incapacity to be extended to these employees.

*Victoria Grant (Millewa Pipelines) Act* 1972 (No. 70) granted to Victoria an amount of up to \$2 million for specified works in the Millewa region under phase 2 of the national water resources development program.

*Wool (Deficiency Payments) Act* 1972 (No. 110) extended the wool deficiency payments scheme from 1 July 1972 until 30 June 1973.

*Wool Industry Act* 1972 (No. 111) created a wool statutory body to be known as the Australian Wool Corporation bringing under a single direction the functions of the Australian Wool Board and the Australian Wool Commission.

Total for Year: 139 Acts.

## CHAPTER 4

### DEFENCE

#### Department of Defence

##### Functions of the Department of Defence

Broadly the functions of the Department of Defence include all aspects of defence policy and the co-ordination and direction of its execution by the Department of the Navy, the Department of the Army, the Department of Air and the Department of Supply. More particularly its functions include strategic appreciations, national intelligence assessments and strategic intelligence reports; defence planning and the deployment of the Defence Forces; principal military adviser to the Minister for Defence; organisation of collective military advice; planning and control of joint military operations; formulation of defence policy objectives; defence programming and disposition of resources to manning, equipment, supplies and works for the Defence Forces, supervision of estimates, allocation of funds among the Defence Group and control of expenditure; scientific advice and formulation of defence research and development policy; formulation of Defence Group policies relating to defence industry and to material procurement and reserves; rationalisation of Service activities and co-ordination of their policies; financial and other common conditions of service in the Defence Forces and during retirement; establishments, postings and promotions where 1 star or 2 star rank is involved; legislation policy for the Defence Group; policy on Defence Group public relations; Defence and Service Advisers abroad; general policy and technical direction of Defence Group electronic data processing project; development and application of EDP; management of Joint Services and inter-departmental machinery engaged in above matters; and civil defence.

##### Organisation, higher defence machinery, and the control of the joint Service machinery

The following are the principal committees of the joint service and inter-departmental advisory machinery within the Department.

The *Defence Committee* is a statutory body consisting of the Secretary, Department of Defence, who is Chairman; the Chairman of the Chiefs of Staff Committee; the Chiefs of Staff of the three Services; the Secretary, Department of the Prime Minister and Cabinet; the Secretary, Department of Foreign Affairs; and the Secretary to the Treasury. Its function is to advise the Minister for Defence on: the defence policy as a whole and the co-ordination of military, strategic, economic, financial, and foreign affairs aspects of defence policy; matters of policy or principle and important questions having a joint Service or an inter-departmental defence aspect; and such other matters having a defence aspect as are referred to the Committee by or on behalf of the Minister for Defence.

The *Chiefs of Staff Committee* is responsible to the Minister for Defence for professional military advice; preparation of military appreciations and plans; control of joint military operations through designated commanders, and direction and co-ordination of related activities; the exercise of executive functions for the control and administration of special forces of a multi-national nature, the responsibility for which is assigned to the Australian Government; recommending the allocation of resources to joint Service Forces in the field; the exercise of executive functions for the control of joint Service (Military) establishments and organisations; the control and co-ordination of joint Service military training and exercises; the development of joint warfare doctrine; and the development of joint operational requirements.

The *Defence Force Development Committee* consists of the Secretary, Department of Defence (Chairman), the Chairman of the Chiefs of Staff Committee, and the Chiefs of Staff of the three Services. It is responsible for advice to the Minister for Defence on: the development of the Defence Forces as a whole; the inclusion in the five year rolling program of major weapons and equipment capabilities; initiation and review of major studies concerned with the development of the Defence Forces; and review of matters of common interest to members and of progress in the preparation of proposals and appreciations for submission to the Government.

The *Defence Administration Committee* consists of the Secretary, Department of Defence (Chairman), the Chairman of the Chiefs of Staff Committee, the Chiefs of Staff of the three Services, the Secretaries of the three Service Departments and the Department of Supply, and a representative of



the Treasury. Its functions are to review the progress of the Defence Program; consider reports of the Defence (Industrial) Committee; consider priority listing of works projects and programs; consider variations in bases of provisioning and scales of rations, clothing, etc.; consider variations in scales and standards of accommodation; and exercise overall control of the Defence Vote.

The *Defence (Industrial) Committee* co-ordinates and makes recommendations regarding the capabilities of Australian industry to meet the matériel requirements of the Services in peace and war. Members of the Defence Business Board are co-opted as necessary for specific subjects. The *Defence Business Board* is constituted to advise on business matters of common interest to the three Services, or important subjects on which the collective advice of the Board is desired from the business aspect, with a view to promoting efficiency and economy in the execution of the Defence Program. The Board comprises businessmen who serve in a part-time honorary capacity. Three of the members also serve as business advisers to the separate Service Departments.

Far-reaching changes have been made in defence administration over the last few years, designed to provide the Government with the best possible advice in making decisions on defence policy by ensuring that all proposals have been thoroughly examined and that the best available military, strategic, technological, intelligence and economic advice is provided. These changes include the establishment of a Joint Staff, the strengthening of the Defence Science Organisation, the establishment of a Joint Intelligence Organisation, strengthening of the Programme Management and Defence Facilities Division and other areas of the Department to provide greater capacity, the introduction of systems analysis and the introduction of the five year rolling program system based on the concepts of planning-programming-budgeting.

#### Basis of current defence policy

The primary aim of Australian defence policy is to ensure the security of Australia and her Territories.

Because of the close links between Australian security and wider regional security, Australian policy stresses not only immediate direct defence, but also progress and stability in nearby countries. The ANZUS Treaty between Australia, New Zealand and the United States of America remains of primary importance. Australia also participates in SEATO and the Five Power Arrangements. As a contributor to the latter, Australia, along with New Zealand and the United Kingdom maintains forces in Malaysia and Singapore.

#### Personnel strengths

The selective national service scheme, which was in its eighth year of operation, was abolished with effect from 5 December, 1972. Those serving under the scheme were given the opportunity of selecting immediate discharge, completing their term of full-time duty or transferring to the permanent force. Those persons eligible for national service selection who had opted to join the CMF were given a similar opportunity in regard to their CMF obligation.

#### PERSONNEL STRENGTHS OF DEFENCE FORCES, JUNE 1963 TO 1973

##### NAVY

<i>Strength at June—</i>	<i>Permanent Forces</i>	<i>Citizen Forces</i>	<i>Emergency Reserves</i>	<i>Total</i>
1963. . . . .	11,663	5,433	..	17,096
1964. . . . .	12,569	5,202	..	17,771
1965. . . . .	13,503	3,762	443	17,708
1966. . . . .	14,714	3,797	686	19,197
1967. . . . .	15,893	3,931	793	20,617
1968. . . . .	16,454	4,047	904	21,405
1969. . . . .	16,943	3,971	1,114	22,028
1970. . . . .	17,304	4,462	897	22,663
1971. . . . .	17,232	5,093	918	23,243
1972. . . . .	17,134	5,378	921	23,433
<b>Estimated strength at June</b>				
1973 . . . . .	17,446	5,525	1,100	24,071

**PERSONNEL STRENGTHS OF DEFENCE FORCES**  
JUNE 1963 TO 1973—*continued*

**ARMY**

<i>Permanent Forces</i>					
<i>Strength at June—</i>	<i>Australian Regular Army</i>	<i>Pacific Islands Regiment</i>	<i>Citizen Forces</i>	<i>Emergency Reserves</i>	<i>Total</i>
1963 . . . . .	21,944	695	27,341	..	49,980
1964 . . . . .	22,681	812	27,505	..	50,998
1965 . . . . .	25,314	1,415	28,146	288	55,163
1966 . . . . .	32,702	1,732	32,046	662	67,142
1967 . . . . .	41,464	2,246	34,670	889	79,269
1968 . . . . .	42,944	2,406	35,762	1,031	82,143
1969 . . . . .	44,051	2,474	34,256	981	81,762
1970 . . . . .	44,533	2,434	31,397	822	79,186
1971 . . . . .	43,769	2,593	29,364	657	76,383
1972 . . . . .	41,290	2,769	26,578	594	71,231
Estimated strength at June 1973 . . . . .	(a)31,000	2,680	n.a.	600	n.a.

**AIR FORCE**

<i>Strength at June—</i>	<i>Permanent Forces</i>	<i>Citizen Forces</i>	<i>Emergency Reserves</i>	<i>Total</i>
1963 . . . . .	15,840	788	..	16,628
1964 . . . . .	16,564	926	..	17,490
1965 . . . . .	17,720	724	26	18,470
1966 . . . . .	19,358	865	170	20,393
1967 . . . . .	20,130	1,059	303	21,492
1968 . . . . .	21,564	907	397	22,868
1969 . . . . .	22,712	902	467	24,081
1970 . . . . .	22,642	841	668	24,151
1971 . . . . .	22,539	788	700	24,027
1972 . . . . .	22,720	778	685	24,183
Estimated strength at June 1973 . . . . .	22,769	742	730	24,241

(a) Excludes National Service.

**Equipment**

An amount of \$139.9 million was spent on equipment of a capital nature in 1971-72; this included \$23.9 million under credit arrangements with the Government of the United States of America. An amount of \$200.1 million is expected to be spent in 1972-73 of which \$56.8 million will be under the credit arrangements with the United States of America.

The major equipment items received in 1971-72 by the Services included: 10 Skyhawk aircraft, 11 Macchi aircraft, 12 Bell Light Observation helicopters and some 100 M113 Tracked Carriers.

Major new equipment items planned for delivery in 1972-73 include 1 hydrographic ship (HMAS *Flinders*), 6 F111C aircraft, 2 Macchi aircraft, 6 Bell Light Observation helicopters and 4 heavy landing craft (LCH).

**Research and development**

The laboratories of the Department of Supply together with the Services' own technical establishments, have continued to work on projects and investigations in support of Service needs. An extension to the agreement for the conduct of the Woomera Range and its associated technical facilities has been arranged with the United Kingdom, and collaborative programs in space tracking and other selected topics have been arranged with the United States of America.

**Defence expenditure****DEFENCE EXPENDITURE BY DEPARTMENT OR SERVICE 1967-68 TO 1972-73**  
(\$'000)

	<i>Defence (a)</i>	<i>Navy</i>	<i>Army</i>	<i>Air</i>	<i>Supply</i>	<i>Other</i>	<i>Total</i>
<b>Actual expenditure—</b>							
1967-68 . . . . .	17,492	223,492	381,019	378,615	90,038	18,877	1,109,533
1968-69 . . . . .	19,077	232,327	410,621	382,559	90,482	29,631	1,164,697
1969-70 . . . . .	23,440	241,140	409,386	301,162	94,091	33,841	1,103,060
1970-71 . . . . .	22,080	247,924	421,037	302,657	106,011	37,864	1,137,573
1971-72— . . . . .							
Total . . . . .	25,789	270,243	465,792	303,239	112,262	39,750	1,217,075
less United States credits . . . . .	..	15,973	10,472	16,687	455	..	43,587
Payments from appropriations . . . . .	25,789	254,270	455,320	286,552	111,807	39,750	1,173,488
<b>Estimated expenditure—</b>							
1972-73— . . . . .							
Total . . . . .	34,720	316,655	453,170	352,171	123,232	43,052	1,323,000
less United States credits . . . . .	..	11,267	4,255	55,263	350	..	71,135
Payments from appropriations . . . . .	34,720	305,388	448,915	296,908	122,882	43,052	1,251,865

(a) Includes defence aid for Malaysia, Singapore and South Vietnam.

**Logistic arrangement with the Government of the United States of America**

The logistic arrangement referred to in previous issues of the Year Book continues to apply. No new credits are being arranged.

**Reserve and Citizen Forces**

Citizen and Reserve Forces may be called out by proclamation for continuous full-time service in a "Time of Defence Emergency". The particular circumstances giving rise to the proclamation of a time of defence emergency could be varied, but would occur in a situation where the Regular Forces needed the full-time support of the Citizen and Reserve Forces in hostilities short of general war.

The three Services also have volunteer Emergency Reserves which may be called out for continuous full-time service when they are needed. These reserves provide a ready means of supplementing and reinforcing operational units.

**Australian forces serving overseas**

As at 31 December 1972 the Australian element of the ANZUK Force in Malaysia and Singapore included:

*Navy*—One escort present in the area at all times, and one submarine present for part of the year; shore support units.

*Army*—One battalion of RAR: one field battery; a reconnaissance flight; a transport platoon; elements of headquarters, signals and logistics units integrated with United Kingdom and New Zealand elements. (The Government has announced that the battalion and battery will not be replaced when their tour of duty is completed about the end of 1973).

*Air Force*—Two squadrons of Mirage fighter aircraft and supporting elements.

**Defence Co-operation with South-East Asian countries**

In support of Australia's policy, the Government is pursuing major programs of defence co-operation with Indonesia, Malaysia and Singapore.

Current defence aid to Malaysia and Singapore, to which amounts of \$16 million and \$4 million respectively have been pledged for the period 1971-74, represents a continuation of programs first commenced in 1964. To date over \$45 million has been spent on these programs. As well, other projects in defence co-operation have been undertaken, most notably the provision of 16 refurbished Sabre jet fighters to the Royal Malaysian Air Force. A wide range of equipment has been and is continuing to be supplied to the Malaysian and Singapore armed forces.



In 1972 a 3 year defence co-operation program with Indonesia was begun. An amount of \$20 million has been set aside for this program and in addition 16 ex-RAAF Sabre aircraft have been given to Indonesia.

Both under the above defence aid and co-operation programs and in the context of defence assistance to countries of the region generally, Australia accepts large numbers of overseas trainees in Service training establishments. During 1972 the total was over 600 spread over all three Services.

## Naval Defence

Prior to 1901, naval defence systems were organised under the State Governments. Information regarding these systems is given in Year Book No. 2, page 1084. An outline of the development of Australian naval policy is given in Year Books No. 3, page 1060, and No. 12, page 1012. An account appears in Year Book No. 15, pages 921-3, of the building of the Australian Navy, its costs, the compact with the Imperial Government, and other details. The growth and the activities of the Royal Australian Navy during the 1939-45 War are shown in Year Book No. 36, pages 1023-7.

Under the provisions of the Commonwealth of Australia Constitution Act the Minister of State for the Navy administers the Department of the Navy. Under the *Naval Defence Act* 1910-1966 the Royal Australian Navy is administered by the Naval Board. The Naval Board consists of the Minister as President, five Navy Members, and the Secretary to the Department of the Navy.

Strong links with the Royal Navy are maintained by a constant exchange of officers for extended tours of duty and by a full exchange of information and ideas. A liaison staff is maintained by the Royal Australian Navy in London and by the Royal Navy in Australia. Advanced training and staff courses in the United Kingdom are provided by the Royal Navy for Royal Australian Navy officers. A liaison staff is also maintained by the Royal Australian Navy in Washington, and a comprehensive exchange of information is provided by this link. Staff courses in the United States of America are also attended by officers of the Royal Australian Navy.

### **Ships of the Royal Australian Navy**

*The Fleet, December 1972:* Melbourne—aircraft carrier; Sydney—transport; Supply—oiler; Stalwart—destroyer tender; Perth, Hobart and Brisbane—guided missile destroyers; Vendetta, Vampire Duchess, Anzac—destroyers; Yarra, Parramatta, Stuart, Derwent, Swan, Torrens,—destroyer escorts; Teal—coastal minesweeper; Curlew, Snipe—coastal minehunters; Moresby, Paluma—surveying ships; Diamantina, Kimbla—oceanographic research ships; Oxley, Otway, Onslow, Ovens—submarines; Attack Aitape, Acute, Adroit, Advance, Archer, Ardent, Arrow, Assail, Aware, Barquette, Barricade, Bayonet, Bombard, Buccaneer, Ladava, Lae, Madang, Samarai—patrol boats; Banks, Bass—auxiliaries;

*In operational reserve, December 1972:* Hawk, Gull, Ibis—minesweepers; Bandolier—patrol boat; Castlemaine—ocean minesweeper; Sprightly—fleet tug.

*On service overseas.* During the year ended December 1972 the following ships served in South-East Asian waters as units of the ANZUK force, with headquarters in Singapore: Derwent, Vampire, Ovens, Onslow and Swan.

The ships Melbourne, Curlew, Snipe, Supply, Stalwart, Teal, Moresby, Sydney, Hobart, Brisbane, Perth, Diamantina also made overseas visits.

### **Fleet Air Arm**

The Fleet Air Arm of the Royal Australian Navy maintains three front line squadrons for embarkation in the operational carrier H.M.A.S. Melbourne. These squadrons currently consist of Skyhawk A4-G fighter/ground attack aircraft, Tracker S2-E anti-submarine aircraft, and Wessex MK. 31B anti-submarine helicopters. Four training and support squadrons are based at the Naval Air Station, at Nowra, New South Wales. Other aircraft operated by the Navy are the Scout helicopter in Moresby, Iroquois helicopter (training and search and rescue), Dakota, Macchi trainer.

### **Ship construction and repairs**

There are two naval dockyards, one at Garden Island, New South Wales, and one at Williamstown, Victoria. Also, the dockyard at Cockatoo Island, which is operated by the Vickers Cockatoo Dockyard Pty Ltd by agreement with the Commonwealth, carries out considerable naval work. All three dockyards carry out ship refitting for the Navy.

Construction of H.M.A.S. Flinders, a small hydrographic ship, is under way at Williamstown Dockyard. An extended refit of the Daring Class destroyers is under way at Williamstown Dockyard with H.M.A.S. Vampire recommissioning into the R.A.N. in late 1971. H.M.A.S. Vendetta and Duchess are currently in refit.

A contract for a further two Oberon class submarines was let during 1971 to Scott Lithgow Ltd. Approval has been given for the construction of a fast combat support ship and an oceanographic ship, both of which are to be built in Australia in the near future. A preliminary design for a new destroyer was completed in 1971. This will determine the major characteristics of the ship and will provide the basis for a detailed design.

#### **Personnel, training, entry, women's services, reserves**

*Personnel.* The estimated strength of the Royal Australian Navy in terms of personnel borne for full-time duty for 1972-73 is 17,461. At 30 December 1972 the actual strength of personnel borne for full-time duty was 2,220 officers and 14,900 sailors, which included 235 officers and sailors of the Citizen Naval Forces and 18 officers and sailors of the Royal Australian Navy Emergency Reserve.

*Training.* On entry, General List officers are trained at the Royal Australian Naval College, H.M.A.S. *Creswell* at Jervis Bay. The College was established to provide trained officers for the R.A.N. Junior entry to the College is at the age of fifteen to seventeen years and senior entry at a maximum age of twenty years. In November 1972 there were 137 cadet midshipmen under training. On completion of initial training, officers go to the Fleet for sea training, followed by advanced training either ashore in Australia, at universities or technical colleges, or at Royal Navy training establishments in the United Kingdom.

H.M.A.S. *Cerberus* at Westernport, Victoria, is the main training establishment for adult sailors in the permanent naval forces, while several advanced training schools are established in New South Wales. The period of initial engagement for sailors varies from six years for tradesmen to nine or twelve years, and on completion sailors may re-engage for shorter periods up to the age of fifty-five.

H.M.A.S. *Nirimba* at Quakers Hill, New South Wales, is the naval school for apprentices. It provides secondary education, as well as technical training in trades, to boys aged fifteen to seventeen and a half years. The school was established in 1956 to meet the R.A.N.'s increased demand for highly skilled tradesmen. In December 1972 there were 517 naval artificer apprentices under training.

H.M.A.S. *Leeuwin* at Fremantle, Western Australia, is the junior recruit training establishment. Entrants must be aged between fifteen and a half and sixteen and a half years. Training lasts one year and instruction is mainly academic, the remaining time being devoted to basic naval and disciplinary training. On completion of the course sailors are posted for a period of sea training, after which they proceed to technical and specialist courses. In December 1972 there were 710 junior recruits undergoing training.

On completion of initial training sailors join the Fleet for sea training before returning to the various training schools at H.M.A.S. *Cerberus*, H.M.A.S. *Penguin* and H.M.A.S. *Watson* at Sydney and R.A.N. Air Station at Nowra, New South Wales. Sailors who are selected for the Submarine service receive initial submarine training in the United Kingdom and a number of technical courses for certain sailors are conducted in the United States of America.

*Direct entry officers.* To meet increasing requirements for officers, direct entries are accepted into the Royal Australian Navy. Short service commissions of seven years are granted on completion of training as seamen, supply or aircrew officers to suitable applicants who have completed their secondary schooling and who are over seventeen years of age and under twenty-four years of age. Other direct entries may be approved outside these age limits from persons with appropriate qualifications and experience.

Opportunities exist for university undergraduates studying medicine, dentistry and engineering to enter the R.A.N., and on successful completion of their studies to commence short or full-time service in the Navy. Fully qualified doctors, dentists, engineers, instructors and legal officers may also enter the R.A.N. directly if they are of the appropriate age.

*Women's Services.* The present Women's Royal Australian Naval Service was inaugurated in January 1951. The numbers serving in shore establishments in December 1972 were 37 officers and 712 W.R.A.N.S. The Royal Australian Naval Nursing Service was reconstituted in November 1964, and its strength in December 1972 was 22 officers.

*Emergency Reserve.* In November 1964 approval was given to form the Royal Australian Naval Emergency Reserve to provide a readily available source of trained manpower which may be called on for continuous full-time service. The authorised establishment of this force is 2,000 officers and sailors. At 30 December 1972 the strength of the reserve available for mobilisation was 72 officers and 858 sailors, which excluded 2 officers and 6 sailors serving full-time. Members are required to complete thirteen days' training annually and are paid an annual bounty.

*Citizen Naval Forces.* The Citizen Naval Forces consist of the R.A.N. Emergency List, Royal Australian Fleet Reserve, Royal Australian Naval Reserve, Royal Australian Naval Reserve (Sea-going), Royal Australian Naval Volunteer Reserve, and Women's Royal Australian Naval Service Reserve. The authorised establishment of the combined forces is 10,000. At 30 December 1972 there were 1,249 officers and 3,976 sailors in the Citizen Naval Forces. These figures excluded 110 officers and 125 sailors serving full-time. The R.A.N.R. is the training reserve of the Citizen Naval Forces. Members carry out weekly training and thirteen days' continuous training annually; sailors engage for periods of three years. Other reserves do not normally carry out part-time training, but members may volunteer for periods of annual training and for periods of full-time service with the R.A.N.

## Military Defence

A detailed historical account of the Australian defence forces prior to federation appears in Year Book No. 2, pages 1075–81. See also Year Book No. 12, page 999.

### Commonwealth systems

Under the terms of the Commonwealth of Australia Constitution Act the Commonwealth took over control of defence matters in March 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in a number of phases. For particulars of the phases which cover the period from the welding together of the military forces of the States into one homogenous Army in 1902 up to the re-establishment of the Military Board and the organisation of Commands after the 1939–45 War see Year Book No. 46 and earlier issues.

National Service Training was introduced in 1951 and suspended in 1959–60. It was re-introduced in June 1965 and suspended in December 1972.

### Organisation

Army Headquarters is responsible for the policy and control of the Australian Army. The Military Board consists of the Minister for the Army, President; the Chief of the General Staff; the Vice Chief of the General Staff; the Chief of Operations; the Chief of Personnel; the Chief of Logistics; the Chief of Matériel; the Citizen Military Forces Member; and the Secretary, Department of the Army. After the 1939–45 War, Command Headquarters were established to implement Army Headquarters policy and to command and administer those units placed under their authority. Command Headquarters are established in the capital cities of Australia. The geographic extent of Commands is<sup>as</sup> follows.

*Northern Command*—the State of Queensland.

*Eastern Command*—the State of New South Wales, less those parts included in Southern and Central Commands.

*Southern Command*—the State of Victoria and part of southern New South Wales.

*Central Command*—the State of South Australia, plus a portion of south-western New South Wales.

*Western Command*—the State of Western Australia.

*Tasmania Command*—the State of Tasmania.

*Northern Territory Command*—the Northern Territory.

In January 1972 the Prime Minister announced that the Army was to be re-organised on a functional basis to consist of a Field Force Command, a Logistic Command and a Training Command. This re-organisation is to take place over a period of three to five years.

The Army is divided into the Field Force, and the Australian Support Area, with both Regular and Citizen Military Forces elements in each. The basic formation of the Field Force is the division, which consists of nine infantry battalions with supporting arms and service units. Within the division three task force headquarters can command varying combinations of divisional units. The substantial part of the combat elements of one Regular and two C.M.F. divisions have been raised, together with logistic support units. The Australian Support Area provides the training, administrative, and command structures on the mainland.

At 31 December 1972, there was the major part of an infantry battalion group stationed in Singapore.



### Personnel, training, women's services, cadets

*Personnel.* The effective strength at 27 December 1972 was: Australian Regular Army, 39,771 (including 202 Citizen Military Forces on full-time duty, and 1,071 Women's Services); Citizen Military Forces, 24,928.

*Staff College.* Until 1938 the training of staff officers was carried out in the various Military Districts throughout Australia, except in cases where officers were selected from time to time to attend courses abroad. In 1938 an Australian Command and Staff School, located in the original Officers' Mess at Victoria Barracks, Sydney, was established. Between 1939 and 1945 the training of staff officers was carried out under varying conditions by different schools in accordance with the changing needs of the war.

Early in 1946 the Staff School (Australia) was established at Seymour, Victoria, and redesignated the Staff College in conformity with other Commonwealth training establishments for training officers for command and staff appointments. The College was later moved to Queenscliff, Victoria, where it is at present situated. The course is held annually and is of twelve months' duration. The normal intake is seventy students, and on successfully completing the course an officer is awarded the symbol 'psc'. The course is designed to train selected officers for appointments in all branches of the staff in peace and war and to prepare them to assume, after experience, command and higher staff appointments.

Included in the 1973 course will be students from Canada, India, Indonesia, Malaysia, New Zealand, Pakistan, Philippines, Thailand, United Kingdom and United States of America. Vacancies on each course are reserved also for officers who may be nominated by the Royal Australian Navy, the Royal Australian Air Force, and the Commonwealth Public Service.

In order to ensure common standards in tactical doctrine, and staff and command training throughout the Commonwealth of Nations, liaison is maintained with other Staff Colleges, and to this end there is also a reciprocal exchange of instructors between the United Kingdom, the United States of America, and Australia. An instructor is also provided by New Zealand.

*Royal Military College.* The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory for the purpose of providing trained officers for the Army. The conditions of entry are laid down in the Royal Military College Regulations. The course is four years of military and academic studies. The first three years are primarily academic and the fourth year military. Following affiliation with the University of New South Wales a Faculty of Military Studies was introduced in 1968. Cadets who meet the requirements for admission to the Faculty may take a course, leading to the award of a degree in Military Studies by the University of New South Wales in one of the following: Arts, Applied Science or Engineering. Cadets not admitted to the Faculty take a diploma course appropriate to their educational background. On graduation, cadets are appointed lieutenants in the Australian Regular Army. The College also trains New Zealand cadets for commissions in the New Zealand Permanent Forces. In 1967 one Thai cadet commenced training at the College; another Thai cadet commenced in 1970, a third in 1972 and a fourth in 1973.

*Officer Cadet School.* The Officer Cadet School was established in 1951 at Portsea, Victoria, for the purpose of speeding up the production of junior regimental officers for the Australian Army. Serving members of the Regular Army, the Citizen Military Forces and civilians between the ages of eighteen and a half and twenty-two and a half are eligible to apply for entrance. A special entry provides for candidates up to twenty-four and a half years. The course lasts for forty-four weeks, and on graduation cadets are appointed second-lieutenants in the Australian Regular Army. Graduates normally proceed to further training at the Army School of the Arm and Service to which they have been allotted before being posted to regimental duties. The Officer Cadet School also trains officers on occasions for Kenya, Malaysia, New Zealand, Thailand, the Philippines, Brunei, the Papua New Guinea Defence Force and South Vietnam.

*Officer Training Unit.* An Officer Training Unit has been established at Scheyville, New South Wales, which is responsible for the training of National Service Officers.

*Women's Royal Australian Army Corps School.* The W.R.A.A.C. School, established in 1952 at Mildura, Victoria, moved to Mosman, New South Wales, in 1958. It has three wings, one whose primary task is the training of officer cadets for the W.R.A.A.C., one for the training of non-commissioned officers at all levels and for other special courses, and one which is a basic training wing. The officer cadets are selected from eligible applicants, who may be serving members between nineteen and a half and thirty-two years of age, or civilians between nineteen and a half and thirty years of age. The course is of twenty-seven weeks' duration and on graduation cadets are appointed lieutenants in the Royal Australian Army Nursing Corps or the Women's Royal Australian Army Corps.

*Army Apprentices' School.* The Army Apprentices' School was opened in 1948 at Balcombe, Victoria, with the aim of training youths as skilled tradesmen for the Australian Regular Army and to form a background for an Army career with prospects of promotion for the graduates. The course is open to youths between the ages of fifteen and seventeen years and provides training in a number of highly skilled trades. Most apprentices attend two years of intensive theoretical and practical work at the Apprentices' School which is followed by two years on-the-job training in an appropriate Army workshop or technical unit under the supervision of an Apprentice Master. The exceptions to this are the Radio Tradesmen who train for three years at the Apprentices' School before one year on-the-job training. Before leaving the Apprentices' School all apprentices take the Victorian Apprenticeship Commission's final grade public examination, which ensures that they will be accepted as qualified tradesmen in civilian life when they eventually leave the Army. In addition to trade and military training, the Apprentices' School provides the facility for apprentices to attain an educational standard of Victorian Technical Leaving.

*Other Schools.* Army schools have been established for the major Arms and Services for the purpose of training officers and other ranks in the up-to-date techniques of their own Arm or Service, to qualify them for promotion requirements, and to produce trained instructors. Courses at Army schools are conducted for members of both the Regular Army and the Citizen Military Forces.

The following Army schools have been established: Jungle Training Centre, Armoured Centre, School of Artillery, School of Military Engineering, Transportation Centre, School of Military Survey, School of Signals, Infantry Centre, Army Aviation Centre, Army Intelligence Centre, Royal Australian Army Service Corps Centre, Royal Australian Army Medical Corps School of Army Health, Royal Australian Army Ordnance Corps Centre, Royal Australian Electrical and Mechanical Engineers' Training Centre, Royal Australian Army Provost School, School of Music, Air Support Unit (Army Component), and Air Movement Training and Development Unit (Army Component).

*Women's Services.* In July 1950 approval was given for the enlistment of women into the Australian Regular Army on a limited scale. Enlistment commenced into the Royal Australian Army Nursing Service in November 1950 and into the Australian Women's Army Corps early in 1951. In February 1951 the Royal Australian Army Nursing Service became a Corps and was designated the Royal Australian Army Nursing Corps (R.A.A.N.C.). During June 1951 the Australian Women's Army Corps was redesignated the Women's Royal Australian Army Corps (W.R.A.A.C.). The Women's Services in the Australian Regular Army now comprise two Corps only, the Royal Australian Army Nursing Corps and the Women's Royal Australian Army Corps.

Women's Services are incorporated in the Citizen Military Forces, and one company of the Women's Royal Australian Army Corps is located in each Command excluding Northern Territory Command. Companies of the Royal Australian Nursing Corps are also located in each Command excluding Northern Territory Command.

*Australian Cadet Corps.* The Australian Cadet Corps is a voluntary organisation. It serves as a training ground to provide, to some extent, the future officers and non-commissioned officers of the Australian Military Forces, and, as such, occupies a foremost position in the scheme of national defence. The Australian Cadet Corps, does not, however, form part of the Australian Military Forces. School Cadet units are raised at educational establishments throughout the Commonwealth except in the Northern Territory. The minimum age for enrolment is the year in which the applicant reaches the age of fourteen years, and cadets, who, in the large majority of schools receive a free issue of A.M.F. pattern uniform, may remain in the Cadet Corps until they cease to be pupils of the educational establishments concerned. A few units retain their own pattern school uniform and are not issued with A.M.F. pattern uniforms. Provision is made for the appointment of officers of cadets, cadet under-officers, warrant and non-commissioned officers on an authorised establishment scale from within school units. School Cadet units may be, and in many cases are, affiliated with Citizen Military Force units. The establishment of the Corps is 46,000 all ranks, and at 30 June 1972 comprised 332 School Cadet units with a posted strength of 38,621 all ranks.

## Air Defence

There are two elements in air defence: static air defence and counter air operations by strike aircraft.

Static air defence is provided by manned interceptor fighter aircraft, at times augmented by surface-to-air missile systems and gun defences, all operating under the direction of a control organisation. Such static systems are limited in their defensive coverage by the radius of action of the fighter aircraft and/or the effective operating range of the controlling radar.



Complementary to the static air defence system and capable of much wider ranging activities are the counter air strike forces. The aim of these forces is to destroy the enemy's offensive air capabilities at their source.

### Higher organisation

The Air Board is responsible to the Minister for Air for the control, organisation, and administration of the Royal Australian Air Force and is constituted as follows: Chief of the Air Staff, Air Member for Personnel, Air Member for Supply and Equipment, Air Member for Technical Services, and the Secretary, Department of Air.

The Air Board administers and controls R.A.A.F. units in Australia and its Territories through two commands, Operational Command and Support Command. The guiding principles of the command organisation within Australia are to decentralise day-to-day operating activities as far as possible and to streamline the force and make it as efficient as possible. Operational units overseas, working within the broad directives issued by the Air Board, comprise the R.A.A.F. components of the ANZUK Force located at Butterworth in Malaysia and in the Republic of Singapore. The R.A.A.F. component of the Australian Forces in South Vietnam has been withdrawn.

The members of the Air Board and their staffs are located at the Department of Air in Canberra. An R.A.A.F. representative is located in London, and air attaches are located in Djakarta, Saigon, Paris, and Washington. *Operational Command* is responsible for the command of operational units and the conduct of their operations within Australia and its territories. *Support Command* is responsible for the recruitment and training of personnel, and the supply and maintenance of service equipment.

### Development of the Royal Australian Air Force

For a short note about the development of the Royal Australian Air Force, see Year Book No. 58, page 93.

### Organisation of units

*Bases.* Each command is established with the units necessary to carry out its allotted function. There is no fixed rule in relation to the number and types of units within each command, as this depends upon the nature of its present and future responsibilities. Where possible, units having similar functions or requiring similar facilities are located together, and the geographical locations are known as bases.

*Formations*—comprising a headquarters unit to control the activities of a number of units at one location; each formation has a base squadron which provides common services to all units at the location.

*Flying squadrons*—strike reconnaissance, air defence, ground attack, medium and short range transport, helicopter, and maritime reconnaissance squadrons which undertake the operational flying and in conjunction with operational conversion units, the operational flying training commitments of the R.A.A.F.

*Operational conversion units*—specialising in operational conversion training of aircrew for the air defence, and ground attack squadrons.

*Aircraft depots*—specialising in major overhaul, etc., of aircraft and equipment.

*Stores depots*—centrally located depots to which stores and equipment ordered by the R.A.A.F. are delivered for distribution to units.

*Airfield construction squadron*—specialising in airfield construction tasks in support of the R.A.A.F. operational component within Australia and the Territories.

*Telecommunications units*—responsible for the communications services of the R.A.A.F.

*R.A.A.F. Hospitals*—hospitals in Australia and at Butterworth providing medical services for the R.A.A.F.

*Flying and ground schools and units*—schools and units specialising in the aircrew and ground staff training required by the R.A.A.F.

*R.A.A.F. Diploma Cadet Squadron and R.A.A.F. Academy*—training units, to diploma and university degree level respectively for officer cadet entrants to the R.A.A.F.

*R.A.A.F. Staff College*—trains specially selected R.A.A.F. officers for higher staff and command posts.



## Aircraft

The R.A.A.F.'s strike reconnaissance force is currently equipped with Canberra and Phantom F4-E aircraft, and F-111C aircraft will be phased into service during 1973. The air defence and ground attack squadrons are equipped with the Mirage 111-O. Transport aircraft currently in use are Hercules C130A and E, Caribou, Dakota, Mystere 20, HS748, and BAC111. The two helicopter squadrons operate the Iroquois and the two maritime squadrons operate Neptune SP2H and Orion P3-B aircraft. Aircraft used for training are the Winjeel, Macchi, HS748, and Mirage 111-D.

## Personnel, reserve, woman's services

At 30 December, 1972, the authorised Permanent Air Force establishment was 24,794 and the Citizen Air Force 1,080; the enlisted strength was Permanent Air Force 22,593 and Citizen Air Force 731, while the strength of the General Reserve was 7,220. The Permanent Air Force figures include the Women's Royal Australian Air Force, which has an establishment of 1,011 and strength of 893 and the R.A.A.F. Nursing Service with an establishment of 119 and strength of 86.

## Department of Supply

For information relating to the creation of the Department of Supply and its development up to 1959 see Year book No. 51, page 1204, and earlier issues. On 18 December 1959 the Department assumed responsibility for the operation and management of space tracking stations in Australia on behalf of the United States of America's National Aeronautics and Space Administration (NASA). On 29 March 1962 Australia became a foundation member of the European Launcher Development Organisation, and the Department accepted responsibility for the test firing of the launching rocket for that Organisation's experimental satellite, using the facilities of the Woomera Rocket Range. The last of these ten test firings at Woomera was on 12 June 1970.

On 1 May 1968 the Department took over the Administration of the Antarctic Division from the Department of External Affairs. In December 1972, this responsibility was transferred to the Department of Science.

## Functions of Department

The functions of the Department of Supply include the following.

- Defence research and development, including the operation of the Joint United Kingdom-Australia Weapons Research Project, and Australian research and development.

- Planning, establishment, operation and management of facilities producing aircraft, guided missiles, small arms, ammunition, explosives, marine engines, clothing, telecommunications equipment, and other defence goods.

- Printing for the Defence group of departments.

- Arrangement of contracts for purchasing in Australia of supplies and services required by the Armed Forces and certain other Government organisations.

- Acquisition, maintenance, and disposal of strategic materials.

- Investigation and development of Australian sources of supply in connection with defence.

- Disposal of surplus or obsolescent Commonwealth goods on behalf of all departments.

- Provision of Commonwealth transport facilities outside the Australian Capital Territory and the Northern Territory.

- Provision and control of stores required for or in connection with matters administered by the Department of Supply, and general storage for other departments as required.

- Arrangements for ascertaining costs and the control and limitation of profits in connection with the production of munitions and other defence goods.

- Operation and management of space tracking stations and certain other facilities on behalf of the Government of the United States of America.

The Minister for Supply administers the *Supply and Development Act* 1939-1966, except in so far as it concerns the building (see also Chapter 12, Transport and Communication), repair, and maintenance of merchant ships and the building, extension, alteration, repair, and maintenance of shipyards, drydocking, and repair facilities for merchant ships.

For the performance of the above functions the Department is organised into five Divisions, namely:

- Research and Development; Munitions Supply; Aircraft, Guided Weapons and Electronics Supply; Planning and Procurement; and Finance and Management Services.

### Research and Development

The Research and Development Division is responsible for scientific research and development in relation to war matériel; the operation of the Joint United Kingdom-Australian Weapons Research Project; and support of space research programs for the United States of America's National Aeronautics and Space Administration (NASA). The headquarters is situated in Canberra, and the following establishments are included in the Division: (a) Weapons Research Establishment, Salisbury, South Australia; (b) Defence Standards Laboratories, Maribyrnong, Victoria; Woodville North, South Australia; Alexandria, New South Wales; Joint Tropical Research Unit (J.T.R.U.) at Innisfail, North Queensland in conjunction with the United Kingdom Ministry of Defence; (c) Aeronautical Research Laboratories, Fishermen's Bend, Victoria; and (d) Central Studies Establishment, Canberra, Australian Capital Territory.

*Weapons Research Establishment.* The Establishment has three scientific Wings, namely Trials Wing, Applied Physics Wing and Weapons Research and Development Wing. The Trials Wing is concerned with the operation, development and instrumentation of the Woomera Range, and the planning, execution, and assessment of trials to meet the requirements of projects approved under the United Kingdom-Australia Joint Project arrangements. The Applied Physics Wings conducts scientific research of significance to the Defence requirements of Australia in the broad fields of systems analysis, electronics, optics, radio propagation, radar, lasers, infra-red, visual surveillance, whilst the Weapons Research and Development Wing is engaged similarly in aeroballistics, weapon systems, rocket propulsion and marine physics for the Defence group of departments.

In addition, an Engineering Wing provides engineering design, development and maintenance facilities, and certain technical services for the scientific Wings (including the Joint Project Trials Wing). Engineering support is also provided for other Research and Development Division Laboratories. The Engineering Wing also undertakes tasks for other Supply organisations and the Australian Defence Services.

*Defence Standards Laboratories.* This Establishment (at Maribyrnong, Victoria) provides a scientific service to the Defence Services, Department of Supply factories and other authorities engaged in support to Defence, generally within the fields of chemistry, physics, metallurgy, engineering, explosives and ammunition, and to a limited extent, in the fields of biochemistry and physiology. It also undertakes scientific research appropriate to its responsibilities and of significance to the defence requirements of Australia. It is the principal Standards Laboratories of the Defence group of Departments and provides calibration facilities for the higher grades of standards. The Australian National Standards Commission has appointed D.S.L. as a verifying authority under the Weights and Measures (National Standards) Act.

Branches are located at Woodville North, South Australia and Alexandria, New South Wales.

The Joint Tropical Research Unit (J.T.R.U.) at Innisfail provides facilities for studying the behaviour and degradation of a wide range of materials and stores in hot/wet and hot/dry tropical environments.

*Aeronautical Research Laboratories.* The work of this establishment is broadly related to the aeronautical aspects of materials science, mechanical engineering, aircraft structures, aerodynamics and system studies. It undertakes research and development on specific defence projects, provides advice and conducts investigations for the Services, Government departments and industries engaged in defence work. Scientific research related to these responsibilities and of significance to the defence requirements of Australia is also undertaken.

*Central Studies Establishment.* This establishment assists the Defence group of departments in the application of Operational Research and Systems Analysis techniques to the study of military problems.

*United States of America's projects.* Agreements have been signed by the Governments of Australia and the United States of America to co-operate in the establishment and operation in Australia of space vehicle tracking stations. The agencies for the Australian and the American Governments are the Department of Supply and the National Aeronautics and Space Administration (NASA) respectively.

As part of the world-wide network supporting NASA's space programme the stations are designed to track spacecraft in their orbits around the earth or on their journey into space, to receive telemetered data from the spacecraft and to issue radio commands controlling the spacecraft's manoeuvres. The Department of Supply is responsible for managing, staffing and operating the stations on behalf of NASA. The stations which are now in operation are at:

Carnarvon in Western Australia (manned space flights and scientific satellites);

Orroral Valley in the A.C.T. (scientific satellites);

Honeysuckle Creek in the A.C.T. (manned space flights).

Tidbinbilla in the A.C.T. (deep space probes and manned space flights). Construction of a 64 metre tracking antenna, to augment the existing 26 metre antenna, was completed in 1972.

An extensive communications system links the tracking stations with the control centres in the United States of America. At all stations the responsibility is vested in a station director who is a senior officer of the Department of Supply.

Under the Australian Government's policy of using the resources of private industry wherever possible, contracts for operation and maintenance services at the stations have been let as follows: Amalgamated Wireless (A'asia) Ltd, (Carnarvon, Orroral Valley and Tidbinbilla), and Standard Telephones and Cables Pty Ltd (Honeysuckle Creek). NASA expenditure on operations in Australia for the period July 1971 to June 1972 was \$12.0 million.

The Department also manages and operates the Project Hibal Balloon Launching Station, based at Mildura, Victoria. The agencies for this project are the Department of Supply and U.S.A. Atomic Energy Commission. The primary purpose of the station is to monitor the level of radioactivity in the upper atmosphere using high altitude balloons. Research experiments are also flown on behalf of United States and Australian Universities and research institutions.

### Munitions Supply

The Department of Supply is responsible for the production of munitions required by the Armed Services. Production is carried out in Government factories, and a wide range of orders is also placed with private industry.

The factories currently in operation and their main products or services are as follows:

Ammunition Factory, Footscray, Victoria (fuses, primers, cartridge cases and small arms ammunition); Clothing Factory, Victoria (uniforms and clothing); Defence Printing Establishment, Victoria (special defence printing requirements); Engine Works, Victoria (building and servicing of marine diesel engines); Explosives Factory, Albion, Victoria (high explosives, propellants, chemicals); Explosives Factory, Maribyrnong, Victoria (propellants, explosives, chemicals, ammunition, rocket motors); Explosives Factory, Mulwala, New South Wales (propellants, chemicals); Munitions Filling Factory, St Marys, New South Wales (ammunition filling and assembly other than small arms ammunition); Ordnance Factory, Bendigo, Victoria (heavy guns, mountings, large turbine gears); Ordnance Factory, Maribyrnong, Victoria (guns, projectiles, fire control equipment, rocket motor components); and Small Arms Factory, Lithgow, New South Wales (rifles, machine guns, mortar shells, small calibre shells and fuse components.)

### Aircraft, guided weapons and electronics supply

*Aircraft.* Production both in Government factories and in industry of military types of aircraft and aero-engines and of other aircraft components required by the Services is administered by the Department of Supply through this Division. Planning of capacity and the negotiation of contractual arrangements concerning aircraft modification, repair and overhaul, and for the supply of spare parts and airborne equipment for the Services, are also functions of the Division.

The following factories are operated by the Division: The Government Aircraft Factory at Fishermen's Bend and the Final Assembly Workshops and Test Airfield at Avalon, Victoria, and the Machine Shop at Northfield, South Australia.

The Government Aircraft Factories have designed and developed a twin turbo-propellor utility aircraft known as Nomad. (*see* Plate 16 overleaf) The first prototype flew in July 1971 and in May 1972 the first production phase of the aircraft was authorised. The first production run will include aircraft for the Australian Army and for sale to other users.

GAF also designed and is producing the Jindivik radio-controlled target aircraft which has been or is being supplied to Britain, Sweden and America as well as to the Weapons Research Establishment and the R.A.N.

Apart from the Government Aircraft Factory, the Commonwealth Aircraft Corporation Pty Ltd is the only major aircraft manufacturer in Victoria. The Corporation was the prime contractor for the Australian production for the R.A.A.F. and R.A.N. of the Italian Macchi jet trainer and for the production of the British Viper engine that powers this aircraft. Hawker de Havilland Australia Pty Ltd at Bankstown and Lidcombe, New South Wales was the major sub-contractor for the Macchi. Macchi trainer production for R.A.A.F. and R.A.N. was completed in 1972.





PLATE 16

*Guided weapons:* The production of the Ikara anti-submarine missile is continuing at the Government Aircraft Factory at Fishermen's Bend. Production of the complete Ikara system, covering broadly the missile, motor, propellants, guidance equipment, launcher, and magazine handling equipment, is a combined effort by departmental establishments and industry, directed and co-ordinated by the Department.

Ikara has been fitted to 9 R.A.N. ships and variants have also been purchased by the British and Brazilian Navies. Other overseas sales are being actively pursued. Turana, a development from the Ikara concept which can use the same shipboard launchers, is a small jet engine-powered, pilotless target aircraft being produced by the Government Aircraft Factory for the R.A.N.

At St. Marys, New South Wales, a Guided Weapons and Electronics Support Facility has been established to repair and maintain guided missiles for the Armed Services. The facility also provides support to the Services in calibration, aerial testing and modelling, and the provision of sonar and environmental test facilities.

*Naval Systems:* A special group has been formed to handle the co-ordination within the Department of the procurement and industrial development aspects of major RAN equipment purchases. The R.A.N.'s new destroyer project, submarine and ship sonar systems, are current activities of this group.

*Electronics:* The Department is responsible for the technical aspects of supply of telecommunications and electronics equipment for the Defence Group. Production is also arranged for other Commonwealth authorities and foreign aid programs. There has been recently a growing involvement in the negotiation of Australian industry participation in Defence purchases abroad.

Some of the more important projects handled by the Department include multi-channel UHF radio relay equipment and a range of military radio pack-sets for the Army, a computer-based message switching system for the Navy and major fixed telecommunications installations for the Air Force.

A continuing program of technology development in electronics is separately sustained from a production development appropriation within the Department of Supply vote.

Contracts have been awarded to industry for the development of a new Australian advanced submarine detection system known as Project Barra. This system is for use by long range maritime patrol and carrier based aircraft and evolved from work at the Department's Weapons Research Establishment.

### Planning and Procurement

*Contract board:* The Board, constituted under the *Supply and Development Regulations 1939-1966*, arranges for the procurement of supplies and services for the Naval, Military and Air Forces of the Commonwealth and for the Department of Supply. Upon request, the Board also arranges contracts on behalf of other Commonwealth departments and authorities. It also arranges disposal—by means of public tender, auction or otherwise—of all surplus or unserviceable Commonwealth-owned goods. The Board comprises representatives of three Service Departments and of the Department of Supply. In each State there is a District Contract Board similarly constituted, which is authorised to exercise the functions of the Contract Board within certain financial limits.

Purchases by the Contract Board and District Contract Boards in all States in 1971-72 totalled \$286.7 million. (This includes a 5 year period contract for aviation fuels, with an estimated value of \$92.4 million). Total realisation from disposals in 1971-72 was \$13.5 million.

*Planning.* The central planning authority of the Department is the Production Planning Branch, whose principal functions are:

- to study manufacturing capacity available for the Services' requirements in peace and war and to plan for and assist in the development of additional production capacity and to plan the organisation of industrial resources for defence production in war;
- to provide and administer reserve stocks of materials and reserve pools of plant, equipment and other requirements needed for rapid expansion in the event of war;
- to receive and allocate to the appropriate departmental divisions all orders and procurement demands placed on the Department; to monitor all aspects of progress in satisfying them and to keep client departments informed of progress;
- to provide advisory services in the field of materials supply and utilisation to Government factories and contractors engaged in the production of munitions requirements;
- to administer the national stockpile of strategic materials.
- to arrange and administer the Department's interface with industry on matters of general policy.

Emphasis is given to a maximum participation by Australian Industry in meeting the requirements of the Defence Services, whenever it is economically and technically possible to do so. Where it is necessary to order a requirement from overseas, the aim is still to involve local industry through co-production or in work of an offset nature.

The Department's efforts are directed towards:

- achieving closer collaboration with industry and bringing to its early attention, the forecast requirements of the Services;
- exercising and upgrading the technological capability of industry by awarding contracts to assist in complex production and development tasks for defence purposes;
- seeking co-production and offset opportunities with overseas industry in defence contracts; and encouraging and facilitating participation in sub-contract work from overseas industry.

*Stores and transport.* The Stores and Transport Branch functions as the central storage and transport authority for most Commonwealth departments. It is the authority for the arrangement of furniture removals at departmental expense in all States, but not in the Northern Territory. It has agents in Darwin. It also operates a shipping and customs section and the England-Australia bulk air freight scheme for Commonwealth departments.

On 28 June 1972 the Branch had under its control land, building and works, vehicles, plant and equipment, valued at \$26,967,000; 4,959 motor vehicles and 3,081,000 square feet of storage space as well as storage facilities for large quantities of chemicals, bulk liquids and explosives.

*Overseas sales and aid.* The Sales and Aid Branch promotes sales of Departmental products and administers the Department's patents and licensing agreements. It is responsible also for administering arrangements for the supply of military type stores under Defence Aid programmes.

The Branch is also responsible for the development, co-ordination and monitoring of Australian industry participation arrangements for Australian defence purchases from overseas, and the development of closer co-operation between Australia and New Zealand in the defence supply field.

**Finance and Management Services**

*Finance.* The total expenditure on Department of Supply activities in 1971-72 was \$216,309,000. This was made up of \$114,819,000 from Parliamentary Appropriations, \$455,000 from Loan Fund and \$101,035,000 from Trust Fund Accounts which included \$24,921,000 for Stores and Transport, \$57,190,000 for Government Munitions and Aircraft Factories, \$17,892,000 for projects for other governments and \$1,032,000 for cafeterias.

*Management Services.* The Technical Services Branch of the Department provides an operating, advisory and consultative service to the Department for industrial engineering, office methods, management operations research, archives and registry practice, instrumentation, electrical and communications engineering services, materials handling, defence standardisation, stores cataloguing, library services and safety.

The Automatic Data Processing Branch provides services to the Department by: assisting in the specification of data-processing systems; designing and implementing computer based systems; co-ordinating computer equipment requirements; and providing ADP training programs.

*Personnel.* At 31 December 1972 the Department employed 20,653 personnel as follows: administration 2,468; cadets and trainees 341; laboratories 6,106; aircraft production 2,108; munitions production 6,083; miscellaneous production 1,010; Stores and Transport Branch 2,509; and overseas staff 28.



## CHAPTER 5

### REPATRIATION

The Repatriation Commission, established under the *Repatriation Act* 1920–1972, consists of three full-time members. It is responsible for the administration of the Repatriation Act and associated legislation, all matters of policy, and the general administration and overall supervision of the Repatriation Department. The Chairman of the Commission is also the Permanent Head of the Repatriation Department, which provides the administrative machinery through which the Commission operates. The central office is in Canberra and there is a branch office, under the control of a Deputy Commissioner, in each State.

The principal functions of the Department are: the payment of war and service pensions and allowances to eligible ex-servicemen and ex-servicewomen and their dependants; the provision of medical treatment for ex-servicemen and ex-servicewomen for injuries and illnesses caused or aggravated by their war service; the provision of medical treatment in certain circumstances for ex-servicemen and ex-servicewomen who are suffering from injuries and illnesses not caused or aggravated by war service; the provision of medical treatment for widows and dependants of deceased ex-servicemen whose deaths are due to war service; and a wide range of other benefits for eligible persons.

Benefits are provided in respect of service, not only in the 1914–18 and 1939–45 Wars, but also in the South African War 1899–1902, the Korea and Malaya operations, with the British Commonwealth Far East Strategic Reserve and the Special Overseas Forces serving in prescribed areas.

For information on war service land settlement *see* Chapter 22, Rural Industry; for statistics relating to war service homes *see* Chapter 9, Housing and Building.

For detailed information about repatriation pensions, allowances, benefits and services, reference should be made to the annual reports of the Repatriation Commission.

#### Total expenditure 1967-68 to 1971-72

#### REPATRIATION: TOTAL EXPENDITURE<sup>(a)</sup>, 1967-68 TO 1971-72 (\$'000)

<i>Class</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Pensions, allowances and other benefits .	200,446	221,678	228,309	240,539	266,107
Medical treatment . . . . .	59,645	62,743	68,395	74,627	87,328
Administration . . . . .	12,292	13,196	14,972	16,700	18,913
Works, rent and maintenance . . . .	4,414	4,929	5,423	7,981	5,301
<b>Total expenditure . . . . .</b>	<b>276,797</b>	<b>302,546</b>	<b>317,098</b>	<b>339,847</b>	<b>377,649</b>

<sup>(a)</sup> Includes expenditure by Departments other than Repatriation as follows: 1967–68, \$4,330,994; 1968–69, \$4,841,789; 1969–70, \$5,298,982; 1970–71, \$5,852,357; 1971–72, \$4,982,764.

### War pensions

The first provision for the payment of war pensions to ex-servicemen and their dependants was made by the Commonwealth Parliament in the *War Pensions Act* 1914. This Act was repealed in 1920 by the *Australian Soldiers' Repatriation Act* 1920 (amended from 31 December 1950 to the Repatriation Act). Amendments to the Act in 1943 considerably widened the eligibility provisions, to the benefit mainly of members of the Citizen Military Forces who had not served outside Australia during the 1939–45 War.

For a brief description of eligibility for war pensions; the conditions for payment of the various rates and allowances; and of operation of the Appeals Tribunals, *see* pages 91–93 of Year Book 55, Chapter 5, Repatriation.

### Pensions and allowances

War pensions and associated allowances are not subject to a means test, except in the case of dependants other than wives, widows, widowed mothers and children. Pensions and allowances payable and the main weekly rates from 7 December 1972 are as follows.

*Pensions for war-caused incapacity*—*Special rate* (totally and permanently incapacitated (T.P.I.) or blinded), \$51.10; an equivalent rate is payable for temporary total incapacity or to an ex-serviceman pensioned for pulmonary tuberculosis who is, as a result, unfit for employment; *Intermediate Rate*. (Capable of part-time work only), \$36.55; ex-servicemen pensioned for pulmonary tuberculosis and able only to work part-time receive the same rate; *General Rate* (capable of full-time employment), 100 per cent basic rate, \$16. *Dependants*—Pensions are also payable to the dependants of incapacitated ex-servicemen: Wife, \$4.05; eligible children \$1.38; (Maximum rates).

*Pensions in respect of death*—*War Widows* (where death was due to war service or, at the date of death, the ex-serviceman was receiving a war pension at the special rate, or its equivalent in respect of pulmonary tuberculosis, or as a double amputee) \$21.50; eligible war widows may also receive a domestic allowance, \$8.50; *children* (under 16 years of age) \$7.35; double orphans (both parents deceased), \$14.70.

*Allowances*—various allowances are provided to supplement war pensions and these vary according to the type and severity of disablement and the special needs of the pensioner. The main allowances and maximum weekly rates payable are: *Special compensation allowance* (payable to certain general rate pensioners assessed as being 75 per cent to 100 per cent incapacitated), from \$4.50 to \$6.00; *Attendants allowance* (for the severely disabled), maximum \$17.50; *Clothing allowances* (where clothing is subject to damage from surgical aids, etc.), from 43 cents to 85 cents; *Domestic allowance* (payable to eligible war widows), \$8.50. Other allowances payable include: *Sustenance allowance*; *Fares, subsistence and attendance allowance*; *Recreation transport allowance*; *Funeral benefits, etc.*

### Summary of war pensions

The following tables provide a summary of war pensions (excluding miscellaneous war pensions) for the 1914–18 War, the 1939–45 War (including war pensions payable under the *Interim Forces Benefits Act* 1947–1966 and the *Native Members of the Forces Act* 1957–1972), the Korea and Malaya operations, the Far East Strategic Reserve, and the Special Overseas Service. Statistics relating to miscellaneous war pensions are shown later in this section.

WAR PENSIONS: SUMMARY, AUSTRALIA, 1971-72

	1914-18 War	1939-45 War(a)	Korea and Malaya operations	Far East Strategic Reserve	Special Overseas Service	Total
New claims granted . No.	494	9,075	466	138	2,868	13,041
Restorations. . No.	18	197	7	1	17	240
Claims disallowed(b) . No.	463	3,351	166	36	941	4,957
Pensions cancelled (gross) No.	135	16,878	554	55	204	17,826
Deaths of pensioners . No.	5,440	6,603	55	5	21	12,124
Pensions in force at 30 June 1972 . No.	72,997	453,548	11,841	2,035	12,403	552,824
Annual pension liability at 30 June 1972 . \$'000	55,620	138,011	1,701	227	1,338	196,897
Amount paid in pensions during the year 1971-72 \$'000	n.a.	n.a.	n.a.	n.a.	n.a.	210,647

(a) Includes interim forces and native members of the forces, for all their disabilities disallowed.

(b) Number of ex-servicemen who had their claims

## WAR PENSIONS: SUMMARY, AUSTRALIA, 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
New claims granted . . .	19,967	17,570	17,129	16,437	13,041
Restorations . . .	343	429	317	569	240
<i>Total additions</i> . . .	<i>20,310</i>	<i>17,999</i>	<i>17,446</i>	<i>17,006</i>	<i>13,281</i>
Pensions cancelled (gross) . .	24,539	22,285	21,222	20,158	17,826
Deaths of pensioners . . .	10,950	11,247	11,785	11,990	12,124
<i>Total reductions</i> . . .	<i>35,489</i>	<i>33,532</i>	<i>33,007</i>	<i>32,148</i>	<i>29,950</i>

## Classes of war pensions

The following tables provide an analysis of the total number of new claims granted, pensions in force, and class of pension for 1971-72.

## WAR PENSIONS: NEW CLAIMS GRANTED, AUSTRALIA, 1971-72

<i>Class</i>	<i>1914-18 War</i>	<i>1939-45 War(a)</i>	<i>Korea and Malaya operations</i>	<i>Far East Strategic Reserve</i>	<i>Special Overseas Service</i>	<i>Total</i>
Ex-servicemen . . .	266	2,998	109	29	948	4,350
Wives and widows of ex-servicemen . . .	221	3,544	102	30	778	4,675
Children . . .	3	2,445	255	79	1,137	3,919
Other dependants . . .	4	88	..	..	5	97
<b>Total . . .</b>	<b>494</b>	<b>9,075</b>	<b>466</b>	<b>138</b>	<b>2,868</b>	<b>13,041</b>

(a) Includes interim forces and native members of the forces.

## WAR PENSIONS IN FORCE: AUSTRALIA, 30 JUNE 1972

<i>Class</i>	<i>1914-18 War</i>	<i>1939-45 War(a)</i>	<i>Korea and Malaya operations</i>	<i>Far East Strategic Reserve</i>	<i>Special Overseas Service</i>	<i>Total</i>
Ex-servicemen . . .	22,626	183,996	3,408	565	4,888	215,483
Wives . . .	27,126	161,210	2,722	462	3,141	194,661
Children . . .	240	72,537	5,295	920	3,956	82,948
War widows . . .	22,783	26,963	159	30	118	50,053
Children of deceased ex-servicemen . . .	26	3,458	143	48	228	3,903
Orphans . . .	9	132	4	..	1	146
Parents . . .	41	4,602	103	9	71	4,826
Others . . .	146	650	7	1	..	804
<b>Total . . .</b>	<b>72,997</b>	<b>453,548</b>	<b>11,841</b>	<b>2,035</b>	<b>12,403</b>	<b>552,824</b>

(a) Includes interim forces and native members of the forces.



# WAR PENSIONS FOR INCAPACITATED EX-SERVICEMEN IN FORCE: BY CLASS OF PENSION AUSTRALIA, 30 JUNE 1972

<i>Class</i>	<i>1914-18 War</i>	<i>1939-45 War(a)</i>	<i>Korea and Malaya operations</i>	<i>Far East Strategic Reserve</i>	<i>Special Overseas Service</i>	<i>Total</i>
Special rate (T.P.I.) or equivalent . . . . .	6,793	14,618	114	7	37	21,569
Intermediate rate . . . . .	167	1,607	20	1	3	1,798
General rate—from 10 per cent to 100 per cent assessed disability(b) . . . . .	15,666	167,771	3,274	557	4,848	192,116
<b>Total . . . . .</b>	<b>22,626</b>	<b>183,996</b>	<b>3,408</b>	<b>565</b>	<b>4,888</b>	<b>215,483</b>

(a) Includes interim forces and native members of the forces. (b) Excludes 78 ex-servicemen who also receive benefits under items 1-6 of the Fifth Schedule and are included above under Special rate (T.P.I.) or equivalent.

## Number of war pensions and annual liability, States, etc.

The following table shows the number of pensions in force and annual liability at 30 June 1972, according to place of payment.

## WAR PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY STATES, ETC., 30 JUNE 1972

<i>Place of payment</i>	<i>Number of war pensions in force at 30 June 1972(a)</i>				<i>Annual pension liability at 30 June(b) (\$'000)</i>
	<i>Incapacitated ex-servicemen</i>	<i>Dependants of incapacitated ex-servicemen</i>	<i>Dependants of deceased ex-servicemen</i>	<i>Total</i>	
New South Wales(c) . . . . .	77,497	97,596	21,798	196,891	71,626
Victoria . . . . .	56,898	73,676	16,868	147,442	53,606
Queensland . . . . .	33,776	45,244	8,084	87,104	31,819
South Australia(d) . . . . .	19,844	25,612	5,126	50,582	16,194
Western Australia . . . . .	17,888	22,932	4,228	45,048	13,583
Tasmania . . . . .	8,580	11,874	2,049	22,503	8,477
Overseas . . . . .	1,000	1,458	796	3,254	1,592
<b>Total . . . . .</b>	<b>215,483</b>	<b>278,392</b>	<b>58,949</b>	<b>552,824</b>	<b>196,897</b>

(a) Includes interim forces and native members of the forces 1939-45 War. (b) Includes domestic allowance payable to widows. (c) Includes Australian Capital Territory. (d) Includes Northern Territory.

## Summary of war pensions, 1967-68 to 1971-72

The following table shows the number of pensions granted, claims rejected, pensions in force and the annual liability for pensions in each of the years ended 30 June 1968 to 1972.

## WAR PENSIONS: SUMMARY, AUSTRALIA, 1967-68 TO 1971-72

<i>Year</i>	<i>Number of war pensions in force at 30 June(a)—</i>						<i>Annual pension liability at 30 June(c) (\$'000)</i>
	<i>Pensions granted</i>	<i>Claims disallowed (b)</i>	<i>Incapacitated ex-servicemen</i>	<i>Dependants of incapacitated ex-servicemen</i>	<i>Dependants of deceased ex-servicemen</i>	<i>Total</i>	
1967-68 . . . . .	19,967	4,578	222,479	334,823	58,674	615,976	164,848
1968-69 . . . . .	17,570	4,950	221,343	319,899	59,071	600,313	171,818
1969-70 . . . . .	17,129	5,333	219,841	305,403	59,432	584,676	178,730
1970-71 . . . . .	16,437	5,110	218,355	291,828	59,356	569,539	185,974
1971-72 . . . . .	13,041	4,957	215,483	278,392	58,949	552,824	196,897

(a) Includes interim forces and native members of the forces 1939-45 War. (b) The number of claimants who had the claims for all their disabilities disallowed. (c) Includes domestic allowance payable to widows.

The following table shows, for the years 1967-68 to 1971-72, the amounts paid in pensions and the places where they were paid.

**WAR PENSIONS: AMOUNT PAID<sup>(a)</sup>, STATES, ETC., 1967-68 TO 1971-72**  
(<sup>(b)</sup>\$'000)

<i>Place of payment</i>	<i>1967-68</i>	<i>1968-69(b)</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
New South Wales(c)	57,424	64,981	65,469	68,992	76,791
Victoria	47,146	51,566	51,214	52,546	57,357
Queensland	25,525	28,543	29,055	30,813	34,183
South Australia(d)	13,807	15,326	15,151	15,722	17,270
Western Australia	11,914	13,038	12,786	13,114	14,384
Tasmania	6,786	7,617	7,831	8,226	9,089
Overseas	1,519	1,414	1,580	1,595	1,573
<b>Total</b>	<b>164,121</b>	<b>182,485</b>	<b>183,086</b>	<b>191,008</b>	<b>210,647</b>

(a) Includes domestic allowances paid to widows. (b) Includes five 12-weekly payments. (c) Includes Australian Capital Territory. (d) Includes Northern Territory.

**Miscellaneous war pensions**

The Commission is also responsible for the payment pensions and allowances to beneficiaries under the *Seamen's War Pensions and Allowances Act* 1940-1972 and Cabinet decisions granting eligibility to persons who were attached to the armed forces during war-time.

The following table shows the number and class of pensions and the annual liability at 30 June 1972, and the table thereafter shows the amounts paid during the years 1967-68 to 1971-72 and the place of payment.

**MISCELLANEOUS WAR PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY, AUSTRALIA, 30 JUNE 1972**

<i>Class</i>	<i>Number of pensions in force at 30 June 1972</i>			<i>Total</i>	<i>Annual pension liability at 30 June(b) (\$'000)</i>
	<i>Members(a)</i>	<i>Dependants of members</i>	<i>Dependants of deceased members</i>		
Act of grace	120	147	55	322	153
Seamen's war pension	79	85	63	227	97
New Guinea civilians	2	..	64	66	89
<b>Total</b>	<b>201</b>	<b>232</b>	<b>182</b>	<b>615</b>	<b>338</b>

(a) 'Member' in this context is a person in respect of whose wartime experience a pension is paid. (b) Includes domestic allowances payable to widows.

**MISCELLANEOUS WAR PENSIONS<sup>(a)</sup>: AMOUNT PAID, STATES, ETC.**  
**1967-68 TO 1971-72**  
(<sup>(b)</sup>\$'000)

<i>Place of payment</i>	<i>1967-68</i>	<i>1968-69(b)</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
New South Wales(c)	159	174	176	179	214
Victoria	71	87	84	90	107
Queensland	44	46	47	50	62
South Australia(d)	29	30	31	32	36
Western Australia	20	23	25	26	29
Tasmania	4	4	4	4	5
Overseas	1	1	1	1	1
<b>Total</b>	<b>328</b>	<b>365</b>	<b>368</b>	<b>382</b>	<b>454</b>

(a) Includes domestic allowance payable to widows. (b) Includes five 12-weekly payments. (c) Includes Australian Capital Territory. (d) Includes Northern Territory.

### Service pensions

The *Repatriation Act 1920-1972* provides for a service pension to be paid, subject to a means test on income and property, to the following persons:

- ex-servicemen who served in a theatre of war (or in a designated *Operational or Special Overseas Service* area) and have attained the age of sixty years or are permanently unemployable;
  - ex-servicemen who suffer from pulmonary tuberculosis, irrespective of the area of their service; and
  - ex-servicewomen who suffer from tuberculosis, or who served in a theatre of war, or served abroad or embarked for service abroad and have attained the age of fifty-five years, or are permanently unemployable.
- veterans of the South African War 1899-1902 who were members of a naval or military force or contingent raised in Australia for active service in that war.

#### Rates of pension

Maximum service pension rates and allowances are the same as those paid to Age and Invalid pensioners under the Social Services Act. The means test provisions relating to payments are similar.

For information on conditions relating to the various rates and allowances and the operation of the means test, see Chapter 13, Welfare Services.

From 7 December 1972, the maximum weekly rates are as follows:

*Standard Rate*, \$21.50, *Married Rate*, \$18.75; *Guardian's Allowance*, \$4 (\$6 if caring for a child under 6 years or an invalid child requiring full-time care); *Supplementary assistance*, \$4 (or \$2 payable to each of a married couple); *Additional pension for eligible children*, \$4.50 for each child; and in addition \$0.25 is payable in respect of the 2nd, 3rd and 4th child.

An ex-serviceman or ex-servicewoman in receipt of a service pension is entitled, with certain exceptions, to free medical benefits for disabilities not caused by war service. These benefits include general practitioner service, specialist service where necessary, full pharmaceutical benefits, surgical aids and appliances (including spectacles), dental treatment, and treatment in Repatriation General Hospitals.

#### SERVICE PENSIONS, SUMMARY, AUSTRALIA, 1971-72

	South African War	1914-18 War	1939-45 War(a)	Korea- Malaya operations	Special Overseas Service	Miscel- laneous (b)	Total
New claims granted . . . . .	1	1,087	9,206	45	..	10	10,349
Restorations . . . . .	..	142	649	3	..	..	794
Cancellations (gross) . . . . .	..	1,360	3,706	27	..	5	5,098
Deaths . . . . .	25	3,160	1,943	7	..	..	5,135
Pensions in force at 30 June 1972	108	31,599	45,713	241	3	49	77,713
Annual liability at 30 June 1972							
\$'000	63	21,924	29,300	112	2	31	51,432
Amount paid in pensions during							
1971-72 . . . . . \$'000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	49,194

(a) Includes native members of the forces. (b) Act of grace pensions.

#### SERVICE PENSIONS: SUMMARY, AUSTRALIA, 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
New claims granted . . . . .	8,880	7,479	13,259	10,321	10,349
Restorations . . . . .	1,052	780	1,642	680	794
<i>Total additions</i> . . . . .	9,932	8,259	(a)14,901	11,001	11,143
Cancellations (gross) . . . . .	4,017	5,009	2,858	3,378	5,098
Deaths . . . . .	4,373	4,601	4,781	5,276	5,135
<i>Total reductions</i> . . . . .	8,390	9,610	7,639	8,654	10,233

(a) Part of the increase in 1969-70 is due to variation in the means test in September 1969. See Chapter 13—Welfare Services.



## Class of service pensions

The following tables give an analysis of the total number of new claims granted and pensions in force for 1971-72.

## SERVICE PENSIONS: NEW CLAIMS GRANTED, AUSTRALIA, 1971-72

Class	South African War	1914-18 War	1939-45 War(a)	Korea- Malaya opera- tions	Special Overseas Service	Miscel- laneous	Total
Ex-servicemen . . .	1	793	6,550	20	..	7	7,371
Wives and widows of ex- servicemen . . .	..	290	2,112	9	..	3	2,414
Children . . .	..	4	544	16	..	..	564
<b>Total . . .</b>	<b>1</b>	<b>1,087</b>	<b>9,206</b>	<b>45</b>	<b>..</b>	<b>10</b>	<b>10,349</b>

(a) Includes native members of the forces.

## SERVICE PENSIONS: NUMBER IN FORCE, STATES, 30 JUNE 1972

State	South African War	1914-18 War	1939-45 War(a)	Korea- Malaya operations	Special Overseas Service	Miscel- laneous	Total
New South Wales(b)	21	10,041	14,115	81	..	8	24,266
Victoria . . .	20	8,749	10,363	44	1	17	19,194
Queensland . . .	11	5,064	9,901	58	1	7	15,042
South Australia(c)	26	3,699	4,289	25	..	10	8,049
Western Australia . . .	26	2,884	4,922	26	1	5	7,864
Tasmania . . .	4	1,162	2,123	7	..	2	3,298
<b>Australia . . .</b>	<b>108</b>	<b>31,599</b>	<b>45,713</b>	<b>241</b>	<b>3</b>	<b>49</b>	<b>77,713</b>

(a) Includes native members of the forces. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

## Number, by class, of service pensions and amount paid

The following tables show the number of each class of service pension in force, the annual liability and the amounts paid for the years 1967-68 to 1971-72.

## SERVICE PENSIONS: NUMBER OF EACH CLASS OF PENSION AND ANNUAL LIABILITY AUSTRALIA, 1967-68 TO 1971-72

Number of service pensions at 30 June payable to—

Year	Ex-servicemen who are—							Total	Annual pension liability at 30 June (\$'000)
	Aged ex-servicemen	Permanently unemployable	Suffering from pulmonary tuberculosis	An aged ex-serviceman	Permanently unemployable	Suffering from pulmonary tuberculosis	Miscellaneous		
1967-68 .	35,254	14,874	1,049	631	15,606	1,091	22	68,527	31,436
1968-69 .	35,404	14,797	1,060	537	14,373	975	22	67,168	33,273
1969-70 .	37,792	17,362	1,154	821	16,237	1,023	31	74,420	40,929
1970-71 .	38,666	18,122	1,201	1,017	16,729	1,030	43	76,808	43,334
1971-72 .	39,657	17,668	1,203	1,186	16,922	1,028	49	77,713	51,432

(a) Includes dependants of deceased service pensioners.

**SERVICE PENSIONS: AMOUNT PAID, STATES, ETC.**  
**1967-68 TO 1971-72**  
**(\$'000)**

<i>Place of payment</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
New South Wales(a)	10,844	11,358	12,806	13,963	15,633
Victoria	7,420	8,070	9,767	10,696	12,075
Queensland	5,292	5,799	7,184	8,042	9,150
South Australia(b)	3,416	3,710	4,253	4,651	5,185
Western Australia	3,777	4,071	4,491	4,769	5,298
Tasmania	1,014	1,093	1,404	1,604	1,841
Overseas	8	7	8	7	12
<b>Australia</b>	<b>31,771</b>	<b>34,108</b>	<b>39,912</b>	<b>43,732</b>	<b>49,194</b>

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

### Medical treatment for ex-servicemen and dependants of ex-servicemen

Medical treatment is provided for all disabilities which have been accepted as due to war service. In addition, and subject to certain conditions, treatment is provided for disabilities not due to war service for: ex-servicemen and ex-servicewomen receiving war pensions at or exceeding the maximum general (100 per cent) rate; ex-servicemen who have contracted pulmonary tuberculosis; nurses who served in the 1914-18 war; widows and certain dependants of ex-servicemen whose deaths have been accepted as due to war service and of deceased T.P.I. pensioners; and certain service pensioners, including service pensioners of the South African War 1899-1902. Ex-servicemen who have contracted pulmonary tuberculosis may receive treatment for that condition.

In-patient treatment for eligible patients is provided at the six Repatriation General Hospitals (one in each State) and seven auxiliary hospitals and sanatoria as follows: *New South Wales*—Lady Davidson Hospital; *Victoria*—Macleod Hospital and Anzac Hostel; *Queensland*—Kenmore Hospital and Rosemount Hospital; *South Australia*—Birrlee Hospital; and *Western Australia*—The Edward Millen Hospital. The Anzac Hostel specialises in the care and treatment of long-term patients.

The total number of available beds for patients in wards or parts of wards, open for use, in all these institutions at 30 June 1972 was 3,504, and expenditure during 1971-72 amounted to \$41,143,758. In addition, expenditure of \$46,184,556 was incurred during 1971-72 on medical services outside these institutions.

#### Repatriation hospitals and institutions

Details of full-time staff in Repatriation general hospitals and other Repatriation institutions are given in the following table.

**REPATRIATION HOSPITALS AND INSTITUTIONS: FULL-TIME STAFF**  
**STATES, 30 JUNE 1972**

<i>Type of institution</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
General hospitals—							
Medical staff(a)	127	79	42	31	26	8	313
Nursing staff	704	475	369	203	201	60	2,012
Other staff	1,134	821	492	346	421	118	3,332
<b>Total, general hospitals</b>	<b>1,965</b>	<b>1,375</b>	<b>903</b>	<b>580</b>	<b>648</b>	<b>186</b>	<b>5,657</b>
Other in-patient institutions(b)	234	123	181	35	48	..	621
Out-patient clinics(a)	164	71	21	33	26	..	315
Limb and appliance centres(b)	71	69	28	18	14	11	211
<b>Grand total</b>	<b>2,434</b>	<b>1,638</b>	<b>1,133</b>	<b>666</b>	<b>736</b>	<b>197</b>	<b>6,804</b>

(a) Medical Officers only, excludes psychologists, speech therapists, etc.

(b) Total staff.

The following table gives details of in-patients treated at Repatriation general hospitals and other Repatriation institutions in each State. The figures shown refer to treatment episodes, e.g. a person who is admitted to hospital twice during a year is counted twice.

**REPATRIATION GENERAL HOSPITALS AND INSTITUTIONS: IN-PATIENTS  
TREATED, STATES, 1971-72**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>REPATRIATION GENERAL HOSPITALS</b>							
In-patients at beginning of year . . . . .	940	569	423	216	322	102	2,572
Admissions and re-admissions during year . . . . .	17,016	10,932	8,582	5,053	5,644	1,430	48,657
<i>Total in-patients treated</i> . . . . .	<i>17,956</i>	<i>11,501</i>	<i>9,005</i>	<i>5,269</i>	<i>5,966</i>	<i>1,532</i>	<i>51,229</i>
Discharges . . . . .	16,116	10,088	8,230	4,720	5,324	1,374	45,852
Deaths . . . . .	906	865	359	310	361	76	2,877
In-patients at end of year . . . . .	934	548	416	239	281	82	2,500
Average daily beds occupied . . . . .	900	559	399	235	281	79	2,453
<b>OTHER REPATRIATION INSTITUTIONS</b>							
In-patients at beginning of year . . . . .	187	119	107	35	36	..	484
Admissions and re-admissions during year . . . . .	2,144	871	1,034	127	465	..	4,641
<i>Total in-patients treated</i> . . . . .	<i>2,331</i>	<i>990</i>	<i>1,141</i>	<i>162</i>	<i>501</i>	<i>..</i>	<i>5,125</i>
Discharges . . . . .	2,031	833	970	123	463	..	4,420
Deaths . . . . .	78	46	48	10	4	..	186
In-patients at end of year . . . . .	222	111	123	29	34	..	519
Average daily beds occupied . . . . .	209	100	123	29	35	..	496

In addition to the Repatriation institutions, eligible patients are treated in other country and metropolitan hospitals and nursing homes at Repatriation expense. During 1971-72, 18,751 Repatriation in-patients were accommodated and treated in hospitals and 926 in nursing homes.

Repatriation psychiatric patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Repatriation Department in separate wings of psychiatric hospitals administered by the State authorities. Excluding 138 on trial leave, there were 688 Repatriation patients in these hospitals at 30 June 1972.

Out-patient treatment is provided throughout the Commonwealth at Repatriation hospitals and clinics and through the Repatriation Local Medical Officer Scheme. During 1971-72, 611,637 out-patients were treated at Repatriation institutions, and visits to or by local medical officers totalled 2,772,618. The number of Repatriation local medical officers in the Commonwealth at 30 June 1972 was 6,301.

#### **Artificial limb and appliance services**

In each State the Repatriation Department maintains a limb and appliance centre, catering for patients requiring artificial limbs, surgical aids and appliances. The centres fit eligible Repatriation patients and those from other Commonwealth departments and instrumentalities, and, when possible, patients from State Government and philanthropic organisations, and private persons who cannot be fitted satisfactorily elsewhere.

Details of production at all centres during 1971-72 are as follows: arms, 210; legs, 1,613; surgical footwear, 8,278; adapted footwear, 1,856; other surgical appliances, 2,456; and repairs, 27,442.

### **General Repatriation benefits and miscellaneous**

#### **Other Repatriation Department activities**

In addition to the payment of pensions and the provision of medical treatment, the Department also provides various benefits and allowances designed to meet the needs of special classes of ex-servicemen and their dependants.



These include educational and vocational training schemes, namely the *Soldiers' Children Education Scheme* (full details of which appear later in this section), the *Disabled Members' Training Scheme*, the *War Widows' Training Scheme* and the *National Service Vocational Training Scheme*.

In addition, gift cars and an annual allowance for their upkeep are provided for ex-servicemen who, as a result of war service, have suffered the amputation of both legs above the knees or amputation of one leg above the knee plus any two other amputations (above the ankle or at or above the wrist) or complete paraplegia resulting in the total loss of the use of both legs. A grant of up to \$100 may be made towards the funeral expenses of eligible ex-servicemen and certain of their dependants. Payment of up to \$10 may be made to provide such necessities as meals, sleeping accommodation etc., for ex-servicemen in need of immediate relief. Also certain concessions in telephone rental charges are provided for some classes of ex-servicemen and their dependants, including war blinded ex-servicemen, war widows and certain service and special rate war pensioners. Ex-servicemen who have been blinded as a result of war service may be issued with talking book machines. The Australian Red Cross Society supplies 'book' records or cassettes for these machines, free of charge, thus enabling the blinded to enjoy a wide range of literature.

Expenditure in 1971-72 on general Repatriation benefits for all wars was \$5,812,000, comprising *Soldiers' Children Education Scheme*, \$3,625,000; recreation transport allowance, \$750,000; and other benefits \$1,437,000.

Trust (and other) funds administered by the Repatriation Department held \$12,676,940 in securities (face value) and \$599,681 in cash, a total of \$13,276,621 as at 30 June 1972.

Reciprocal arrangements with the United Kingdom, New Zealand and other countries provide for the payment of pensions, etc., to eligible Australian ex-servicemen living overseas and to eligible ex-servicemen from overseas who are living in Australia.

### **Soldiers' Children Education Scheme**

The *Soldiers' Children Education Scheme* was established in 1921 and operates with the assistance of the voluntary Education Boards in each State. These Boards consist of representatives of government and non-government education authorities and of ex-service and other organisations which have a general interest in the welfare of the children of ex-servicemen. The objects of the Scheme are to assist and encourage eligible children in acquiring a standard of education compatible with their aptitude and ability, and to prepare them to enter an agricultural, commercial, professional, or industrial calling of their own choice. Eligible children are children of ex-servicemen whose deaths have been accepted as due to war service; or of ex-servicemen who died from causes not due to war service but who were receiving at the date of death a war pension at a special rate for blindness, total and permanent incapacity, pulmonary tuberculosis, or amputation of two or more limbs; or of ex-servicemen who, as a result of war service, are blinded, totally and permanently incapacitated, or receiving the special rate pension for pulmonary tuberculosis and are likely to receive such pension for a period of at least three years. From the commencement of primary education up to twelve years, school requisites and fares are provided. An education allowance is also payable for a child from commencement of secondary education or from the age of twelve years, whichever is the earlier, while the child is undertaking primary or secondary education. Further assistance beyond, or parallel with, the later years of secondary education is provided where an approved beneficiary continues with a course of specialised education or training necessary for a career. At this stage of training, in addition to the education allowance, fees are paid and text books, essential equipment and other minor benefits are provided.

All education allowances are subject to an allowed income limit test, i.e. the amount of education allowance payable depends on the amount of income a child receives over the allowed limit. The scale of maximum allowances payable to eligible children at various stages of education is as follows.

**SOLDIERS' CHILDREN EDUCATION SCHEME**  
**WEEKLY RATES OF ALLOWANCES, FROM 1 JANUARY 1973**  
(£)

<i>Type of training</i>	<i>Living at home</i>	<i>Living away from home</i>
At school—		
Aged 12 and under 14 years . . .	2.60	8.60
Aged 14 " " 16 years . . .	3.90	8.60
Aged 16 " " 18 years . . .	8.60	13.30
Professional (university, etc.) . . .	15.39	25.00
Agricultural . . . . .	..	4.30
Industrial (apprenticeship, etc.) . . .	3.15	6.25

The following tables show the costs of education under the scheme for the year ended 30 June 1972 and the number of children in receipt of benefit at 30 June 1972.

### SOLDIERS' CHILDREN EDUCATION SCHEME: EXPENDITURE, 1971-72

(\$'000)

	<i>N.S.W.(a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Cost of education of beneficiaries—							
Under 12 years of age . . .	7	6	8	1	1	2	25
12 years of age and over . . .	1,357	885	654	340	189	157	3,582
<b>Total expenditure . . .</b>	<b>1,364</b>	<b>891</b>	<b>662</b>	<b>341</b>	<b>190</b>	<b>159</b>	<b>(c)3,607</b>

(a) Includes Australian Capital Territory.  
of \$18,000.

(b) Includes Northern Territory.

(c) Excludes overseas expenditure

### SOLDIERS' CHILDREN EDUCATION SCHEME: NUMBER RECEIVING BENEFITS(a) AT 30 JUNE 1972

<i>Type of training</i>	<i>N.S.W. (b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A. (c)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Over- seas</i>	<i>Total</i>
At school—								
Aged under 14 years(d) . . .	608	418	336	140	93	104	13	1,712
Aged 14 and under 16 years . . .	791	543	463	182	122	134	16	2,251
Aged 16 and under 18 years . . .	792	482	227	186	66	59	18	1,830
<b>Total at school . . .</b>	<b>2,191</b>	<b>1,443</b>	<b>1,026</b>	<b>508</b>	<b>281</b>	<b>297</b>	<b>47</b>	<b>5,793</b>
Professional . . . . .	486	358	226	132	102	48	12	1,364
Agricultural . . . . .	5	5	8	3	4	..	..	25
Industrial . . . . .	..	2	..	..	1	..	..	3
<b>Grand total . . . . .</b>	<b>2,682</b>	<b>1,808</b>	<b>1,260</b>	<b>643</b>	<b>388</b>	<b>345</b>	<b>59</b>	<b>7,185</b>

(a) Refers only to children in receipt of an education allowance. (b) Includes Australian Capital Territory.  
(c) Includes Northern Territory. (d) From 12 years of age or the commencement of secondary education, whichever is the earlier.

### Settlement of returned service personnel on the land

Reference to the settlement of returned service personnel on the land will be found in the chapter Rural Industry.

### Re-establishment benefits for national servicemen

Subject to prescribed conditions, special re-establishment benefits are provided for national servicemen under the *Defence (Re-establishment) Act 1965-1968*. They apply to all national servicemen whether or not they have served on 'special service' and ensure that servicemen will not be at a disadvantage on their return to civil life. The scheme includes appropriate full or part-time training where it is necessary or desirable for effective re-settlement. The assistance includes payment of tuition fees, other associated fees and fares, and an allowance towards the provision of books and equipment as appropriate. A training allowance is also provided for trainees undertaking full-time studies.

Re-establishment loans may be granted, subject to certain conditions, to those national servicemen in need of financial assistance for their re-establishment in civil life and who, prior to call-up, were engaged on their own account in professional practice, business, or agricultural occupations, or who, because of their call-up, were prevented from engaging in these occupations or, in any other case where it is considered desirable in the circumstances to grant a loan.

The maximum amounts of the loans are business and professional \$3,000, agricultural \$6,000.

## The Services Canteens Trust Fund

The Services Canteens Trust Fund was established under the *Services Trust Funds Act 1947*. Its funds are derived from the assets and profits of wartime services canteens, mess and regimental funds of disbanded units, and several other sources.

The total amount transferred to the Fund to 31 December 1972 was \$11,057,051. The Act prescribed that, of this, \$5 million and such further amounts as the trustees of the Fund might from time to time decide, should be devoted to the provision of education facilities for the children of eligible ex-servicemen and ex-servicewomen, and that the balance of the Fund should be used to provide relief for ex-servicemen and ex-servicewomen and their dependants in necessitous circumstances.

The Fund is administered by ten honorary trustees appointed by the Governor-General. The trustees have power to determine the persons or groups of persons to benefit from the Fund and the extent of the benefits to be granted within the provisions of the Act, and to appoint regional committees to assist with the administration. Members of regional committees are all persons who served in the 1939-45 War or are widows of men who served during the war. The trustees and members of regional committees serve in an honorary capacity.

### Assistance from the Fund

Persons eligible for assistance from the Fund are those who, between 3 September 1939 and 30 June 1947, served in the Australian Naval, Military or Air Forces, including members of the canteens staff of any ship of the Royal Australian Navy, persons duly accredited to any part of the Defence Forces who served in an official capacity on full-time paid duty, and their dependants. The trustees have introduced schemes for providing welfare relief for ex-servicemen and ex-servicewomen who are eligible for benefits, and for their dependants; benefits for children of eligible ex-servicemen and ex-servicewomen who are suffering from serious and incapacitating afflictions; and education benefits for the children of eligible ex-servicemen and ex-servicewomen. From its inauguration in 1947 the Fund is to be available for forty years for both welfare relief and educational benefits.

The total assistance granted under these three schemes from the inception of the Fund to 31 December 1972 was \$12,712,216 (\$454,140 during 1972) distributed as follows: *Welfare relief*, \$3,897,188 (\$145,842); *Assistance for afflicted children*, \$336,511 (\$5,991); and *Educational assistance*, \$8,478,517 (\$302,307).

For detailed information on the operation of the Fund reference should be made to the annual reports of the Services Canteens Trust Fund.

## Ex-service personnel, widows and children

In November 1971, a survey based on the quarterly population survey (see Chapter 20, Employment and Unemployment) was conducted at the request of the Repatriation Department and the Services Canteens Trust Fund. The survey questions were designed to identify four classes of person, namely:

- (a) those who had served in the Australian armed forces during wartime;
- (b) those ex-service personnel who had a disability which had been accepted by the Repatriation Department as having been war-caused and those who were in receipt of a war pension;
- (c) widows of men who had served during wartime;
- (d) children, under 21 years of age, of ex-service personnel or their widows.

Certain categories of persons covered by the survey were not asked the survey questions. These comprise persons who were patients in hospitals or sanatoria other than Repatriation Hospitals, or who were inmates of gaols, etc., and for whom, for the purposes of the survey, the institution was regarded as their dwelling. The estimates ascribe to such persons characteristics (e.g. ex-service status) according to the proportions found in the sample. Patients in Repatriation Hospitals, however, were asked the relevant questions.

The comments on the reliability of estimates and table of standard errors given in Chapter 20, Employment and Unemployment, are also applicable to this survey.

Definitions used and further details of the survey were published in the mimeographed bulletin *Ex-service Personnel, widows and children*, November 1971 (Reference No. 15.1).



EX-SERVICE PERSONNEL(a), BY WAR AND AREA OF SERVICE, STATES, NOVEMBER 1971  
(<sup>'000</sup>)

War and area of service	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(b)
1914-18 War(c)	19.9	17.0	7.7	4.4	4.4	*	56.3
1939-45 War(d)	251.0	183.9	111.0	62.0	60.7	21.9	698.5
Vietnam	9.5	6.0	4.3	*	*	*	27.2
Other	11.4	5.3	4.4	*	*	*	26.1
<b>Total</b>	<b>291.8</b>	<b>212.1</b>	<b>127.5</b>	<b>70.1</b>	<b>71.3</b>	<b>25.4</b>	<b>808.1</b>
Outside Australian territorial waters(a)	211.6	157.3	91.4	51.0	48.3	18.5	585.8
Within Australian territorial waters	80.2	54.8	36.0	19.1	23.0	6.9	222.3

(a) As defined for the purposes of the survey. (b) Includes the Northern Territory and the Australian Capital Territory. (c) Includes the South African War. (d) Includes those who also served during the 1914-18 War and all occupation forces in Japan.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

EX-SERVICE PERSONNEL(a), BY WAR AND AREA OF SERVICE AND  
WAR PENSION STATUS, AUSTRALIA, NOVEMBER 1971  
(<sup>'000</sup>)

War and area of service	With an accepted war-caused disability		Total	Other	Total Ex-service personnel
	In receipt of a war pension	Not in receipt of a war pension			
1914-18 War(b)	25.4	*	26.5	29.8	56.3
1939-45 War(c)	178.8	37.1	215.9	482.6	698.5
<b>Total(d)</b>	<b>210.5</b>	<b>42.2</b>	<b>252.6</b>	<b>555.5</b>	<b>808.1</b>
Outside Australian territorial waters(a)	182.1	36.3	218.4	367.5	585.8
Within Australian territorial waters	28.4	5.9	34.3	188.0	222.3

(a) As defined for the purposes of the survey. (b) Includes the South African War. (c) See note (d) to table above. (d) Includes all other operations as defined for the purposes of the survey.

\* See footnote \* to table above.

WIDOWS OF EX-SERVICEMEN(a): STATES, NOVEMBER 1971  
(<sup>'000</sup>)

War of husband's service, pension status	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(b)
1914-18 War(c)	24.5	21.3	9.7	5.6	6.7	*	69.5
1939-45 War(d)	29.3	21.9	12.5	6.3	9.2	*	82.4
<b>Total(e)</b>	<b>53.9</b>	<b>43.3</b>	<b>22.4</b>	<b>11.9</b>	<b>15.9</b>	<b>4.1</b>	<b>152.3</b>
In receipt of a war widow's pension	16.2	17.7	6.4	5.0	6.6	*	54.4
Not in receipt of a war widow's pension	37.7	25.6	16.0	6.9	9.3	*	97.9
With children under 21 years of age	7.2	5.0	*	*	*	*	20.2
Without children under 21 years of age	46.7	38.3	18.5	10.5	13.9	*	132.1

(a), (b), (c), (d) See first table in this section. (e) See note (d) to table above.

\* See footnote \* to first table in this section.

## EX-SERVICE PERSONNEL(a), SUMMARY, AUSTRALIA, NOVEMBER 1971

	Males	Females	Persons
	'000	'000	'000
Total ex-service personnel . . . . .	745.6	62.5	808.1
In the labour force . . . . .	599.5	28.9	628.5
Employed . . . . .	594.2	28.6	622.8
In full-time jobs . . . . .	574.5	18.8	593.3
In part-time jobs . . . . .	19.7	9.8	29.5
Unemployed . . . . .	5.3	*	5.6
Not in the labour force . . . . .	146.1	33.6	179.7
Never married . . . . .	65.9	5.8	71.7
Married(b) . . . . .	631.1	49.3	680.4
Widowed . . . . .	37.9	5.3	43.3
Divorced . . . . .	10.7	*	12.8
Aged—			
Under 45 years . . . . .	70.5	*	72.3
45-49 years . . . . .	171.9	30.6	202.5
50-54 years . . . . .	179.0	16.2	195.2
55-59 years . . . . .	121.0	7.2	128.2
60 years and over . . . . .	203.3	6.6	209.9
Ex-service personnel as a proportion of the population aged 20 years and over . . . . .	(per cent) 18.8	(per cent) 1.5	(per cent) 10.1
Labour force participation rate(c) . . . . .	80.4	46.2	77.8
Unemployment rate(d) . . . . .	0.9	*	0.9

(a) As defined for the purposes of the survey.  
ex-service personnel who were in the labour force.(b) Includes permanently separated.  
(d) The unemployed as a percentage of the civilian labour force.(c) The percentage of  
The unemployed as a percentage of the civilian labour force.

\* Less than, or based on a figure less than 4,000. See footnote \* to first table in this section.

## CHAPTER 6

# INTERNATIONAL RELATIONS

Australia's international relations have developed as a natural outcome of the country's growth from 19th century colonial status to independent nationhood. Initially, association with Britain and co-operation with the Commonwealth countries were the chief pre-occupations. Later, as a consequence of the vital role played in the Pacific by the United States of America in the 1939-1945 War and during the Cold War period in ensuring Australian security, close relations were also developed with that country.

Although these links remain important factors in Australia's foreign policy, the emphasis in recent years has become increasingly focused on participation in regional associations and relations with Asian and Pacific countries. At the same time, Australia is not neglecting the development or expansion of relations with countries of all ideologies in all parts of the world, since Australia's interests are world-wide.

Australia's foreign policy today aspires to a more independent stance; one that is less militarily oriented, not liable to suggestions of racism, and one that will achieve for Australia regard in the world at large as a distinctive, tolerant and co-operative nation.

### Relations with Asia and the Pacific

Asia and the Pacific is the area of Australia's primary interest and concern. This has long been reflected by Australia's active role in regional associations and organisations such as the United Nation's Economic Commission for Asia and the Far East (ECAFE), the Colombo Plan, the Asian Development Bank, the South-East Asia Treaty Organisation (SEATO) the South Pacific Forum, the South Pacific Commission and in many other commercial and professional bodies, both private and government.

Australia's policy in the Asian and Pacific regions is one of continuing and constructive involvement. Australia believes that peace and prosperity there largely depend on the ability of member countries to co-operate; and for major powers, both local and external, to reach a durable accommodation of interests in which the fears and aspirations of the others and the independence of the smaller or less populous countries of the region will be respected. As new situations emerge Australia will develop flexible approaches towards relations with countries of these regions. Australia has welcomed the ceasefire agreements in Vietnam and Laos and the prospects for peace in Indo-China which they open up. It looks forward to a situation where Australia and its neighbours, as well as the major powers, can play a role in the economic reconstruction and rehabilitation of the whole Indo-China area.

In the longer term, Australia seeks new forms of regional co-operation that are geared to the realities of the present and future. It would like to see consideration given by all countries of the region to the creation of a new regional organisation that would be genuinely representative of the Asia-Pacific region, without ideological overtones, and designed to help free the region from great power rivalries and ideological interference from outside.

Australia welcomes the progress achieved by the Association of South-East Asian Nations (ASEAN), which it considers a model of successful regional co-operation in South-East Asia. It has also followed with interest the initiatives of ASEAN member countries to achieve a zone of peace, freedom and neutrality in South-East Asia; it supports these efforts and would encourage other countries to do likewise. Australia continues to take a sympathetic interest in the developments in the Indian subcontinent.

Australia places high priority on maintaining and strengthening its cordial and close relations with Indonesia, its nearest neighbour. Australia believes that its future is indissolubly linked to Indonesia's, and that the relations between the two countries are a crucial factor which will determine the future of their region for the rest of this century.



Australia also gives high priority to developing and strengthening her relations with Japan, both bilaterally and through international forums, on a basis of mutual trust and understanding. The two nations have become increasingly interdependent in economic terms: Japan is Australia's biggest trading partner and Australia is Japan's second largest source of imports. Both countries have a common interest in the Asia-Pacific regions' economic and political development.

Diplomatic relations were established with the People's Republic of China in December 1972, and an Australian Embassy in Peking opened on 12 January 1973. Australia looks forward to the development of a substantial relationship with this major power in the Asian region, and preliminary arrangements for a number of exchanges in trade and cultural fields have already commenced.

In the Pacific, Australia looks to expand and consolidate its co-operative activities to promote the stability, welfare, harmony and economic development of the region. Australia has long been an active member of the South Pacific Commission and was a founding member of the South Pacific Forum. Matters of common interest and concern are frequently discussed with Australia's Pacific partners.

#### **Relations with the great powers**

It remains a constant objective of Australian foreign policy to maintain close and continuing co-operation with the United States of America. This relationship is formally expressed in the ANZUS Treaty, which establishes the framework for both countries to co-operate and to consult closely at both the political and official levels. The ANZUS Treaty remains the crucial treaty for Australia, being one of its basic associations in the Pacific and the legal embodiment of the common interests of the people of Australia, New Zealand and the United States of America.

Australia will also continue to promote the development of closer understanding and co-operation to our mutual benefit with the Soviet Union, the other great power with a substantial interest in the Asian and Pacific region.

#### **Relations with Britain and the Commonwealth**

Although aspects of the relationship are changing, the ties of kinship that most Australians have with Britain will remain strong. Because of differences in geographical orientation some divergences in our respective approaches to certain problems of Asia and Europe may emerge, but Australia's relationship with Britain will nevertheless continue to be of great importance. There are opportunities in many fields for mutually beneficial co-operation, which will be facilitated by our close ties of friendship.

Australia also attaches great importance to the Commonwealth of Nations, a unique multi-racial group which brings Australia into more intimate and informal contact at all levels with African, Asian and Caribbean countries. Australia will continue to take an active role in the meetings of Commonwealth Heads of Government, and will co-operate in economic, scientific and technical programs for social and economic advancement.

#### **Relations with Europe, Africa, the Middle East and South America**

Australia also recognises the importance of relations with other parts of the world, including Europe, Africa, the Middle East and South America. The growing trade with member countries of the European Economic Community is an example of Australia's world-wide commercial interests. There is also increasing scope for co-operation in the scientific and technical fields. Australia, in 1971, joined the OECD (Organisation for Economic Co-operation and Development), which has provided another point of contact with countries sharing similar social and economic circumstances.

### **United Nations Participation**

Australia played an active part in drafting the Charter of the United Nations at the Conference on International Organisation in San Francisco in 1945, and has been a consistent supporter of the principles and objectives of the United Nations since its foundation. Its influence in the affairs of the United Nations has been exerted through the annual debates in the General Assembly, through membership of the Security Council (1946-47, 1956-57 and 1973-74), the Economic and Social Council (1948-50, 1953-55 and 1962-64), and the Trusteeship Council, and of the several specialised agencies.

Australia, as one of the administering powers of Nauru up to January 1968, and as the sole administering power of New Guinea, has been a member of the Trusteeship Council since 1947. The Australian Ambassador to the United Nations, was elected president of the Council at its 37th session in May 1970. Australia is a member of the Special Committee on Colonialism (the Committee of Twenty-four) and the Committee to consider measures for keeping the Indian Ocean a zone of peace. In 1950, Australia contributed to the participating United Nations forces in Korea. It has also been directly involved in United Nations peace-keeping activities in Greece (1947), Palestine (1947), Indonesia (1948-49), Kashmir (1947), the Arab States and Israel (1948), Hungary (1956-57) and Cyprus (since 1964). It is also a member of the special Committee on Peace-keeping Operations. Australia contributed its share of the costs, both assessed and voluntary, of the United Nations operations in the Congo. It also contributes personnel for United Nations observer missions in India/Pakistan and the Middle East, and has made voluntary contributions totalling \$US1,620,000 (to 31 December, 1972) to the costs of maintaining the United Nations force in Cyprus. In addition, it has borne approximately \$US2,800,000 being the cost of maintaining its police element in Cyprus. It also bought \$US4,000,000 worth of United Nations bonds. These were issued to meet financial difficulties arising mainly from the cost of these operations, and from the failure of some member States to pay assessed contributions toward the Middle East and Congo operations.

In the economic, social and cultural sphere, Australia has contributed to the work of the United Nations through membership of its specialised agencies and of the Economic and Social Council. It was a foundation member of one of the four United Nations Regional Economic Commissions—the Economic Commission for Asia and the Far East, the 4th, 15th and 24th Sessions of which were held in Australia. In 1963, Australia became a full regional member of ECAFE.

Australia has had varying periods of service as a member of the executive bodies of the principal specialised agencies. As a leading agricultural country, Australia played a large part in the establishment of the Food and Agriculture Organisation. The 10th Regional FAO Conference for Asia and the Far East was held in Canberra in August-September 1970. Australia continues to be a member of the International Civil Aviation Organisation, the International Telecommunication Union, the World Meteorological Organisation, the Inter-Governmental Maritime Consultative Organisation, the International Atomic Energy Agency, and Universal Postal Union. It is also a member of the United Nations Development Program, the International Labour Organisation, the World Health Organisation, UNESCO and numerous financial and other bodies. Australia became a member of the United Nations Governing Council for Environmental Programs for three years from 1973.

Australia's commitment to the United Nations ideal is based on the belief that only through such a body can there be concerted international efforts for the maintenance of a stable and harmonious world order. The purposes of the Charter are, indeed, basic to Australia's approach to international relations. The manifesto of the governing Labor Party commits it to 'make every effort to make the United Nations an effective instrument for justice and peace and political, social and economic advancement'.

To reflect the new Australian Government's more positive support for regional initiatives, and its determination to condemn colonialism and racial discrimination, Australia changed its voting policy on nine politically significant resolutions in the last (1972) session of the United Nations General Assembly.

The changes in policy are especially noticeable in the case of southern African issues. Australia can in future be expected to support resolutions calling for self-determination, decolonisation, and an end to racial discrimination especially in Africa. It recently voted for increased sanctions against Rhodesia and the consideration by the Security Council of similar action against South Africa and Portugal because of their refusal to apply the sanctions imposed by the Security Council. At the same time, Australia has been careful neither to encourage nor to support calls for the use of force to change the racial policies applied in southern Africa.

Australia supported the 1972 resolution establishing an Ad Hoc committee of 15 to study the implications of proposals to declare the Indian Ocean to be a zone of peace, and also agreed to serve on the committee. These actions demonstrate Australia's concern with questions affecting the future stability of the Indian Ocean area, and its readiness to play a responsible part in regional initiatives.

Since its assumption to office, the present Government has also signed the two International Covenants on Human Rights, and has taken action to expedite ratification of the United Nations Convention on the Elimination of All Forms of Racial Discrimination. In addition it has recently ratified the Nuclear Non-Proliferation Treaty and the Seabed Arms Control Treaty, as well as ILO Conventions Nos. 87 and 98.

### Australia's contribution in international aid

Since 1945, Australia has spent almost \$2,000 million on aid. In the last decade, official development assistance has more than trebled from \$64 million in 1961-62 to \$200 million in 1971-72. For 1972-73, it is expected to reach \$220 million. This represents an expenditure of about \$17 per head of population in Australia.

Australia has consistently been among the first three or four of the major aid donors, with a figure for direct government aid averaging 0.56 per cent of GNP over the last four financial years.

The table below lists various items of expenditure which can be fairly readily identified as economic (i.e. non-military) aid to developing countries:

**AUSTRALIA'S CONTRIBUTION IN INTERNATIONAL AID, 1967-68 TO 1971-72**  
(\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Bilateral programs—</b>					
Colombo Plan—					
Projects, equipment, experts and training . . . . .	13,431	12,901	15,186	16,846	17,252
Special aid to Indonesia . . . . .	4,750	5,916	7,881	7,721	9,949
SEATO Aid Program . . . . .	2,498	2,389	2,398	1,891	1,999
Indus Waters Scheme . . . . .	1,996	2,137	293	663	2,021
Emergency Food Aid—India . . . . .	9,500	..	..	..	..
International Grains Arrangement—					
Food Aid Convention . . . . .	..	11,853	11,578	11,840	11,788
Laos Foreign Exchange Operations Fund . . . . .	535	723	643	643	643
Special Commonwealth African Assistance Program . . . . .	423	411	495	497	548
Commonwealth Co-operation in Education(a) . . . . .	753	749	885	732	790
South Pacific Aid Program . . . . .	416	407	495	543	996
Special Aid to Vietnam . . . . .	..	..	..	390	110
Special Aid to Khmer Republic . . . . .	..	..	..	960	1,196
Other . . . . .	97	166	508	548	(b)4,112
<i>Total bilateral aid . . . . .</i>	<i>34,399</i>	<i>37,653</i>	<i>40,362</i>	<i>43,274</i>	<i>51,404</i>
<b>Multilateral programs—</b>					
International Financial Institutions—					
IDA (International Development Association)(c) . . . . .	7,134	2,020	2,820	2,815	6,864
ADB (Asian Development Bank)(c) . . . . .	3,795	7,589	3,795	4,120	662
United Nations Programs—					
UNDP (UN Development Program) . . . . .	1,292	1,241	1,549	1,785	1,735
UNRWA (UN Relief and Works Agency) . . . . .	180	180	180	180	180
UNHCR (UN High Commissioner for Refugees) . . . . .	134	135	175	262	175
UNICEF (UN Children's Fund) . . . . .	480	480	550	825	550
World Food Program . . . . .	698	692	1,000	963	843
Other . . . . .	15	338	412	508	691
<i>Total multilateral aid . . . . .</i>	<i>13,728</i>	<i>12,675</i>	<i>10,480</i>	<i>11,458</i>	<i>11,700</i>
<b>Papua New Guinea(d)—</b>					
Grant to Administration . . . . .	77,594	86,994	95,999	101,497	108,169
Expenditure by other Departments . . . . .	14,000	12,382	18,885	20,471	28,551
<i>Total Papua New Guinea aid . . . . .</i>	<i>91,594</i>	<i>99,376</i>	<i>114,884</i>	<i>121,968</i>	<i>136,720</i>
<b>Total international aid . . . . .</b>	<b>139,721</b>	<b>149,704</b>	<b>165,726</b>	<b>176,700</b>	<b>199,824</b>

(a) Administered principally by the Department of Education. (b) Includes emergency relief for Pakistan refugees (\$2,300,000) and rehabilitation and relief aid for Bangladesh (\$1,515,000). (c) The Department of the Treasury has the principal responsibility for the management of Australia's participation in these organisations. (d) The grant to assist the economic development of the Territory of Papua New Guinea is administered principally by the Department of External Territories.

About two-thirds of Australia's aid goes to Papua New Guinea (See Chapter 28, The Territories of Australia). The remainder is channelled through multilateral programs (e.g. the U.N. Agencies and the Asian Development Bank) and through Australia's bilateral programs. The following table sets out the geographic distribution of Australia's bilateral aid.



**AUSTRALIA'S BILATERAL AID BY GEOGRAPHICAL REGION AND COUNTRY**  
(\\$'000)

<i>Country</i>	<i>Cumulative total ex- penditure to 30 June 1972</i>	<i>Expendi- ture 1971-72</i>	<i>Country</i>	<i>Cumulative total ex- penditure to 30 June 1972</i>	<i>Expendi- ture 1971-72</i>
<b>ASIA—</b>			<b>SOUTH PACIFIC—continued</b>		
Afghanistan . . .	995	131	Gilbert and Ellice Islands . . .	407	90
Bangladesh . . .	5,949	5,949	New Hebrides . . .	203	102
Bhutan . . .	698	93	Tonga . . .	580	150
Brunei . . .	82	..	Western Samoa . . .	817	202
Burma . . .	11,362	906	Miscellaneous . . .	76	20
India . . .	82,579	2,901	<i>Total</i> . . .	6,726	1,897
Indonesia . . .	81,243	17,824			
Iran . . .	154	83	<b>AFRICA—</b>		
Khmer Republic . . .	8,065	1,760	Botswana . . .	119	24
Korea . . .	2,961	428	Gambia . . .	110	41
Laos . . .	9,787	1,227	Ghana . . .	547	129
Malaysia . . .	29,242	2,914	Kenya . . .	566	106
Maldiv Islands . . .	180	56	Lesotho . . .	124	29
Nepal . . .	2,658	839	Malawi . . .	157	98
Pakistan . . .	40,812	1,404	Mauritius . . .	447	247
Philippines . . .	6,437	319	Nigeria . . .	816	135
Singapore . . .	6,256	568	Rhodesia . . .	71	3
Sri Lanka . . .	16,790	1,154	Sierra Leone . . .	186	15
Thailand . . .	31,279	3,129	Sudan . . .	67	10
Vietnam . . .	24,427	3,017	Swaziland . . .	71	15
Miscellaneous, i.e. administrative costs, regional projects, etc.	6,104	1,247	Tanzania . . .	493	82
<i>Total</i> . . .	368,060	45,949	Uganda . . .	204	112
<b>SOUTH PACIFIC—</b>			Zambia . . .	330	116
British Solomon Islands Protectorate . . .	278	77	E.A.C.S.O.(a) . . .	27	18
Fiji . . .	4,365	1,256	Miscellaneous . . .	111	6
			<i>Total</i> . . .	4,446	1,186
			<b>Grand Total</b> . . .	<b>379,232</b>	<b>49,032</b>

(a) East African Common Services Organisation.

NOTE. The cumulative totals do not include expenditure made under the Commonwealth Co-operation in Education Scheme before 1968-69.

This bilateral aid is channelled through a number of programs, which include the Colombo Plan, the South Pacific Aid Program and the Special Commonwealth African Assistance Plan. The largest of these is the Colombo Plan which is the principal framework for economic development within the Asian region.

Through these programs, Australia assists with a number of developmental projects including the provision of experts and equipment, balance of payments support and training of students.

The following table sets out the numbers of students who have been trained in Australia under the aid programs.

**STUDENTS TRAINED IN AUSTRALIA UNDER AID PROGRAMS**  
(Number)

<i>Scheme</i>	<i>Cumulative total at 30 June 1972</i>	<i>Total in training at 30 June 1972</i>	<i>Number of new awards 1971-72</i>
Colombo Plan . . .	11,794	1,616	1,089
SCAAP(a) . . .	886	89	118
SPAP(a) . . .	341	55	73
SEATO (civilian training)	86	10	4
AIAS(a) . . .	128	10	4
<b>Total</b> . . .	<b>13,235</b>	<b>1,780</b>	<b>1,288</b>

(a) The Special Commonwealth African Assistance Plan (SCAAP) was established to provide training awards to Commonwealth countries in Africa. The South Pacific Aid Program (SPAP) provides the same sort of assistance to the islands and territories of the Pacific. A small training program known as the Australian International Awards Scheme (AIAS) is intended to meet occasional requests from countries outside these regions, particularly those from the Commonwealth countries of the Caribbean and Mediterranean regions.

## Membership of the Organisation for Economic Co-operation and Development (OECD)

Australia joined the Organisation for Economic Co-operation and Development (OECD) as a full member on 7 June 1971.

The Organisation's membership consists of the following 23 countries: Australia; Austria; Belgium; Canada; Denmark; Finland; France; Germany; Greece; Iceland; Ireland; Italy; Japan; Luxembourg; Netherlands; Norway; Portugal; Spain; Sweden; Switzerland; Turkey; The United Kingdom; The United States of America; and the two special status countries of New Zealand and Yugoslavia.

The OECD was established in 1961 to succeed the former Organisation for European Economic Co-operation (OEEC) which had its origins in the administration of Marshall Plan aid in Europe after the Second World War. The need for a new Organisation was apparent by the beginning of the 1960's, when changing economic conditions called for new arrangements for international economic co-operation. The functions of the OEEC were revised and membership was extended with the inclusion of the United States of America and Canada, and later Finland and Japan in the new Organisation.

The broad aims of the Organisation are to achieve high, sustainable economic growth and employment as well as financial stability in member countries, and to contribute to the expansion of world trade on a multi-lateral, non-discriminatory basis.

OECD member countries, which as a group comprise the major industrialised countries of the world, now participate in a well-established pattern of consultation, co-operation and co-ordination on a wide range of economic matters, including mutual balance of payments problems.

Since joining the OECD, Australia has participated in many important meetings, including the Ministerial Council Meetings in June 1971 (when Australia was invited to join the Organisation) and May 1972; the Economic Policy Committee (which meets two or three times a year) and the Ministers of Science Meeting in October, 1971.

The Secretary-General of the OECD, visited Australia in March 1972 and held wide-ranging discussions with the Australian Government and leaders in primary and secondary industry.

### OECD functions

The following is a brief description of some of the more important OECD functions.

The *Council* is the OECD's governing body. It meets annually at Ministerial level and regularly at Permanent Representative level. Questions to be submitted to the Council, whether relating to the general policy of the Organisation or to the progress of its work, are first examined by the *Executive Committee*.

The *Economic Policy Committee* has developed as an important means of maintaining and improving the co-ordination of member countries' economic policies. The Committee's work has become increasingly involved in identification of the major problems which accompany growth in industrialised countries, and the policy implications of these problems.

Ten separate committees in the *Financial Affairs* area cover invisible transactions, payments, financial markets, monetary and foreign exchange matters, fiscal affairs, insurance, tourism, restrictive business practices, maritime transport and consumer policies.

The *Economic Development Review Committee* is responsible for the annual economic survey of individual member countries. Each country's economic situation and policies are examined by a panel of representatives of other member governments and the results are published in an annual survey.

The *Development Assistance Committee (DAC)* attempts to expand the aggregate volume of resources made available to the developing countries and to improve their effectiveness. All the major developed countries of the OECD are members of the DAC, which Australia joined separately in 1966. Member countries of the DAC comprise the largest donors of financial and technical aid, representing some 95 per cent of the global total of aid from both official and private sources to developing countries.

The *Environment Committee* investigates problems associated with pesticides, water and air pollution, noise and urban development, etc.

The OECD emphasises the economic and trade implications of environmental policies, relating such policies to qualitative objectives of growth policies, and formulating concerted solutions to problems. In May 1972 the Organisation adopted a set of 'guiding principles concerning the international economic aspects of environmental policies', incorporating *inter alia* the 'polluter pays' principle.

The *Trade Committee* and its subsidiary bodies consider questions which relate to trade policies and practices or consult with each other on particular trade issues. The Committee is also used as a forum for the co-ordination of trade policy issues which arise in relation to non-member countries, particularly the developing countries. The Organisation has played a central role in the introduction of a system of generalised non-reciprocal and non-discriminating tariff preferences for the benefit of developing countries.

The *Committee for Scientific and Technological Policy* assumed the functions of the former Committee for Science Policy in January 1972 and had its mandate extended to include responsibility for ensuring co-operation among member countries in the field of technology as well as science. The Committee examines national policies and links between science, economic growth and social development. Ministerial meetings on science and technology are held every two years for which the Committee makes the necessary preparations.

The *Manpower and Social Affairs Committee* studies and compares member countries' progress with manpower and industrial relations, and studies aspects of social planning.

Other major committees of the organisation include those for agriculture, industry, science, education, energy and oil.

*Problems of world trade.* The meeting of the Ministerial Council of the OECD in June 1971 authorised the establishment of a small, high level group to study problems of world trade and related matters arising in the longer term perspective. Australia has made submissions to this group. The group's report was released in September 1972. In October 1972, the council decided that discussions on international monetary and trade issues should continue in the organisations Executive Committee, which would meet at 'high level' for the purpose.

### Diplomatic representation

The Department of Foreign Affairs is responsible for advising the Minister for Foreign Affairs and the Australian Government on the conduct of foreign affairs and relations with foreign Governments. Its officers staff the Australian diplomatic service and the consular and administrative service.

In March 1973 Australia maintained the following diplomatic and consular missions overseas and full details of these missions are available from the Department of Foreign Affairs, Canberra, A.C.T.

NOTE. In certain cases the Head of Mission accredited to one country is also accredited to another country. Where this is the case the name of the country in which the Head of Mission is located is shown in brackets. Except where indicated the missions are located in capital cities.

### AUSTRALIAN MISSIONS OVERSEAS

#### Embassies (50)

Afghanistan ( <i>in Pakistan</i> )	Hungary ( <i>in Austria</i> )	Peru ( <i>in Argentina</i> )
Arab Republic of Egypt	Indonesia	The Philippines
Argentina	Iran	Poland ( <i>in U.S.S.R.</i> )
Austria	Ireland	Portugal
Belgium	Israel	Romania ( <i>in Yugoslavia</i> )
Brazil	Italy	South Africa, Republic of
Bulgaria ( <i>in Yugoslavia</i> )	Japan	Spain
Burma	Khmer Republic	Sweden
Chile	Korea Republic of	Switzerland
China, People's Republic of	Laos	Thailand
Czechoslovakia ( <i>in Austria</i> )	Lebanon	Turkey, Republic of
Denmark ( <i>in The Netherlands</i> )	Luxembourg ( <i>in Belgium</i> )	Union of Soviet Socialist Republics
Ethiopia ( <i>in Kenya</i> )	Mexico	United States of America
Finland ( <i>in Sweden</i> )	Nepal ( <i>in India</i> )	Uruguay ( <i>in Argentina</i> )
France	The Netherlands	Vietnam Republic of
Germany, Federal Republic of	Norway ( <i>in Sweden</i> )	Yugoslavia
Greece	Pakistan	



**High Commissions (20)**

Bangladesh	Malaysia	Sri Lanka
Britain*	Malta	Tanzania
Canada	Mauritius ( <i>in</i> Tanzania)	Tonga ( <i>in</i> Fiji)
Fiji	Nauru	Uganda ( <i>in</i> Kenya)
Ghana	New Zealand	Western Samoa ( <i>in</i> Fiji)
India	Nigeria	Zambia ( <i>in</i> Tanzania)
Kenya	Singapore	

**Commission**

Hong Kong

**Other**

*Mission to*—European Atomic Energy Community (Brussels); European Coal and Steel Community (Brussels); European Economic Community (Brussels); United Nations (New York); United Nations (Geneva); Organization for Economic Co-operation and Development (Paris).

*Consulate-General in*—Los Angeles; New York; San Francisco; Chicago; Berlin; Hamburg; Osaka; Milan; Bombay; Calcutta; Karachi; Bahrain.

*Consulate in*—Graz; Geneva; Noumea; Capetown; Honolulu; Rio de Janeiro.

Specialist officers of the Department of Trade, other Commonwealth Government Departments and the Defence Services stationed abroad are attached to Australian diplomatic or consular missions. Senior attached officers are in some cases accredited to the missions with diplomatic or consular ranks approved by the Minister for Foreign Affairs. In addition, the Department of Trade and Industry maintains Trade Commissioner posts which engage in trade promotion in a number of cities where Australia does not have diplomatic or consular representation (*see* below).

The Department of Immigration similarly maintains offices overseas which engage in selection of migrants (*see* page 124).

**Agents-General for States**

From early times the Australian colonies maintained agents in London to encourage immigration and to carry out commercial and financial negotiations. Since federation the States have continued to maintain Agents-General in London, all of whom work in close co-operation with the High Commissioner for Australia at Australia House, London. Some of the States also maintain other offices overseas e.g. New South Wales has offices in New York, Tokyo and Wiesbaden.

**Diplomatic representatives in Australia**

There are forty-eight non-Commonwealth and ten Commonwealth countries accredited to Australia.

The following list shows the diplomatic missions in Australia. Full details of Commonwealth and foreign representation in Australia are available from the Department of Foreign Affairs, Canberra. Consular representatives are not included and particulars of these are available from the Department of Foreign Affairs, Canberra. There are about 300 such representatives in Australia, and sixty countries are represented.

**DIPLOMATIC REPRESENTATION TO AUSTRALIA****Embassies (48)**

Arab Republic of Egypt	Greece	The Philippines
Argentina	Indonesia	Poland
Austria	Iran	Portugal
Bangladesh	Ireland	Romania ( <i>in</i> Japan)
Belgium	Israel	South Africa, Republic of
Brazil	Italy	Spain
Bulgaria	Japan	Sweden
Burma	Khmer Republic	Switzerland
Chile	Korea	Thailand
China, Peoples Republic of	Laos	Turkey, Republic of
Czechoslovakia ( <i>in</i> Indonesia)	Lebanon	Union of Soviet Socialist Republics
Democratic Republic of Germany	Mexico	United States of America
Denmark ( <i>in</i> New Zealand)	Nepal ( <i>in</i> Japan)	Uruguay
Federal Republic of Germany	The Netherlands	Vietnam Republic of
Finland	Norway	Yugoslavia, Socialist Federal Republic of
France	Pakistan	
	Peru	

\* Administered by Department of the Prime Minister and Cabinet.

**High Commissioners (10)**

Britain	India	Singapore
Canada	Malaysia	Sri Lanka
Fiji	Malta	
Ghana	New Zealand	

**Overseas trade representation****The Australian Trade Commissioners Service, January 1973**

The Department of Overseas Trade maintains Trade Commissioners at fifty-one posts in thirty-seven countries. Twenty-five editions of the Department of Overseas Trade's promotion periodical *Austral News* now circulate in more than 100 countries in seven languages. (See also Australian Trade Missions in the chapter Overseas Transactions.)

The countries where Australian Trade Commissioner posts are located are shown in the following list. Except where indicated the missions are located in capital cities.

Argentina	Indonesia	Singapore
Austria	Iran	South Africa, Republic of (Johannesburg, Cape Town)
Bahrain	Italy (Rome, Milan)	Sweden
Belgium	Japan (Tokyo, Osaka)	Switzerland (Geneva, Berne)
Britain	Korea	Thailand
Canada (Montreal, Vancouver, Ottawa, Toronto)	Kenya	Trinidad
Chile	Lebanon	Arab Republic of Egypt
Fiji	Malaysia	United States of America (Washington, D.C., Chicago, New York, San Francisco, Los Angeles)
France	Mexico	U.S.S.R.
Germany, Federal Republic of (Bonn, Hamburg)	The Netherlands	Yugoslavia
Greece	New Zealand (Wellington, Auckland, Christchurch)	
Hong Kong	Pakistan	
India	Peru	
	The Philippines	

Full details of the Australian Trade Commissioner posts are available from the Department of Overseas Trade, Canberra, A.C.T.

**Australian Trade Correspondents and Marketing Officers**

Detached Australian Trade Correspondents and Marketing Officers have no official status but supplement the work of the Trade Commissioner in whose Territory they are located. Correspondents are located in Addis Ababa, Ethiopia; Istanbul, Turkey; Mozambique; Port Louis and Mauritius; Marketing Officers are located in Bombay and Calcutta, India; Brussels, Belgium; Colombo, Ceylon; Dublin, Ireland; Madrid, Spain; Rangoon, Burma; Rio de Janeiro, Brazil; and Tel Aviv, Israel.

**Trade Commissioners of overseas governments in Australia**

The Trade Representatives of overseas governments in Australia are shown in the following list. Full details of Trade Representatives in Australia are available from the Department of Foreign Affairs, Canberra, A.C.T.

Austria (Sydney)	Mexico (Sydney)
Belgium (Sydney, Melbourne, Perth)	New Zealand (Sydney, Melbourne, Canberra, Brisbane, Perth)
Britain (Canberra, Sydney, Melbourne, Brisbane, Adelaide, Perth)	Norway (Canberra)
Bulgaria (Sydney)	Pakistan (Sydney)
Canada (Sydney, Melbourne)	Peru (Canberra)
People's Republic of China (Canberra)	Philippines (Sydney, Melbourne)
Czechoslovakia (Sydney)	Poland (Sydney)
Finland (Sydney)	Romania (Sydney)
France (Sydney, Melbourne)	Singapore (Sydney)
Greece (Sydney)	South Africa, Rep. of (Melbourne)
Hungary (Sydney)	Spain (Sydney)
Italy (Sydney, Canberra, Melbourne)	Sri Lanka (Sydney)
Indonesia (Sydney, Canberra)	Sweden (Sydney, Melbourne)
Japan (Canberra)	United States of America (Sydney, Melbourne)
Malaysia (Sydney)	U.S.S.R. (Canberra)

**Commonwealth Migration Offices overseas**

The Department of Immigration has established offices overseas to handle migration matters, and in some countries regional officers are provided. Inquiries and applications may also be made at any Australian diplomatic, consular or trade post overseas. Full details are available from the Department of Immigration, Canberra, A.C.T.



## CHAPTER 7

### POPULATION

This chapter includes statistics of the distribution, growth and structure of the population and statistics of the numbers and characteristics of overseas arrivals and departures. More detailed figures will be found in the bulletin *Demography* (4.9), and *Overseas Arrivals and Departures* (4.1 and 4.23), and current statistics are published in the *Monthly Review of Business Statistics* (1.4), the *Quarterly Summary of Australian Statistics* (1.3), and the mimeographed series *Summary of Vital and Population Statistics* (4.11) and *Overseas Arrivals and Departures* (4.3). The final detailed results of each population census are published in a series of printed volumes and parts (*see* list for 1966 and 1971 censuses at end of this Year Book, *also* the chapter Miscellaneous—Statistical and other official publications of Australia).

With the proclamation of the *Constitution Alteration (Aboriginals)* 1967 on 10 August 1967 the provision in Section 127 of the Constitution requiring the exclusion of Aborigines in reckoning the numbers of the people of the Commonwealth or of a State or other part of the Commonwealth, was repealed. Accordingly, population statistics for all dates subsequent to 10 August 1967 no longer exclude full-blood Aborigines. Estimates for earlier periods back to 30 June 1961 have also been revised to include these Aborigines.

Particulars of the Aboriginal population are given on pages 142–3 in this chapter.

#### Types of population statistics

Statistics of the population and its characteristics for Australia or the component States and Territories or other constituent areas at specific dates are divided in four main ways.

- (i) *Those ascertained by census enumeration.* The population censuses result in comprehensive statistics of characteristics of the population, such as age, sex and birthplace.
- (ii) *Those ascertained by 'population counts'.* From time to time in specific areas there are additional enumerations of the population, which are known as population counts, because normally very little information other than the number of persons and their sex is obtained.
- (iii) *Current estimates of number, sex and age.* Estimates are prepared for dates subsequent to a census, taking account of natural increase and net migration since the last census.
- (iv) *Projections of the population.* Projections of the population and its age/sex structure are prepared from time to time, based on current estimates of population by age and sex and on assumptions about future trends in mortality, fertility and net migration.

#### The census

In Year Book No. 53 a special article was included outlining the history, purposes, legal basis, organisation, and publication of results of population censuses in Australia (*see* pages 164–70 of that issue).

##### Early 'musters'

Although regular censuses were not instituted in the several colonies until the years specified in the table below, population returns in one form or another have existed from a very early period in the history of Australia. The earliest enumerations were known as 'musters', and although the actual results of very few of them have been preserved, it is probable that during the early days of colonisation they were of frequent occurrence. The first official 'muster' was taken in 1788 soon after the new settlement at Sydney Cove was formed, and in 1803 the first 'muster' of convicts in Van Diemen's Land (now Tasmania) was conducted.

##### Development of the census

The first regular census in Australia was taken in New South Wales in November 1828, and included the population of Moreton Bay (now Queensland) but not Van Diemen's Land (Tasmania). Particulars were asked concerning the names, ages and civil conditions of the inhabitants. The next

census was taken in 1833, and was followed by another in 1836, when arrangements were made for the enumeration of the population of the newly-established settlement at Port Phillip, (Victoria). The first censuses taken in Tasmania, Victoria and Queensland as separate colonies were in 1841, 1854 and 1861 respectively. The first regular census in South Australia was taken in 1844 and in Western Australia in 1848. The 1881 census was the first simultaneous census taken in Australia and formed part of the first simultaneous census of the British Empire.

The following table shows the total population recorded at each census conducted prior to 1891.

POPULATION(a), CENSUSES IN AUSTRALIA, 1828 TO 1886

Date	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1828- November	36,598	..	..	..	..	..	..	..	..
1833- 2 September	60,794	..	..	..	..	..	..	..	..
1836- 2 September	77,096	..	..	..	..	..	..	..	..
1841- 2 March	130,856	..	..	..	..	..	..	..	..
1844- 31 December	..	..	..	..	..	51,450	..	..	..
1844-26 February	..	..	..	17,366	..	..	..	..	..
1846-26 February	..	..	..	22,390	..	..	..	..	..
1847- 2 March	189,609	..	..	..	..	..	..	..	..
1847-31 December	..	..	..	..	..	67,313	..	..	..
1848-10 October	..	..	..	..	4,622	..	..	..	..
1851-1 January	..	..	..	63,700	..	..	..	..	..
1851- 1 March	268,344	..	..	..	..	70,130	..	..	..
1854-26 April	..	(b)234,298	..	..	..	..	..	..	..
1854- 30 September	..	..	..	..	11,743	..	..	..	..
1855-31 March	..	..	..	85,821	..	..	..	..	..
1856- 1 March	269,722	..	..	..	..	..	..	..	..
1857-29 March	..	408,998	..	..	..	..	..	..	..
1857- 31 March	..	..	..	..	..	..	..	..	..
1859-31 December	..	..	..	..	14,837	..	..	..	..
1861- 7 April	350,860	538,628	(b)30,059	126,830	..	89,977	..	..	..
1864- 1 January	..	..	61,467	..	..	..	..	..	..
1866-26 March	..	..	..	163,452	..	..	..	..	..
1868- 2 March	..	..	99,901	..	..	..	..	..	..
1870- 7 February	..	..	..	..	..	99,328	..	..	..
1870- 31 March	..	..	..	..	24,785	..	..	..	..
1871- 2 April	502,998	730,198	..	185,626	..	..	..	..	..
1871- 1 September	..	..	120,104	..	..	..	..	..	..
1876-26 March	..	..	..	213,271	..	..	..	..	..
1876- 1 May	..	..	173,283	..	..	..	..	..	..
1881- 3 April	749,825	861,566	213,525	276,414	29,708	115,705	(c)3,451	..	2,250,194
1886- 1 May	..	..	322,853	..	..	..	..	..	..

(a) Excludes full-blood Aborigines. (b) Previously included with New South Wales. (c) Included with South Australia for the censuses of 1866, 1871 and 1876. Actually Northern Territory was not transferred to the Commonwealth until 1 January 1911.

### Australia-wide censuses

State and Territory populations recorded at the Australia-wide censuses taken over the period 1881 to 1971 are shown in the following table. The figures relate to the political boundaries of the several States (or Colonies) and Territories as they existed at the date of each census, except that the Northern Territory has been shown separately from South Australia for the censuses prior to its transfer from that State. The years of formation of the separate Colonies and transfer of the Territories are shown in the chapter Discovery, Colonisation and Federation of Australia (page 5).

At censuses up to 1966, in conformity with Section 127 of the Constitution, Aborigines were excluded from the published population. In 1967 the Constitution was altered to remove this provision, and the 1971 Census therefore includes Aborigines. In order to provide comparability between recent censuses, the 1961 and 1966 population in the following tables has been amended to include Aborigines and therefore differs from the 1961 and 1966 population previously published.

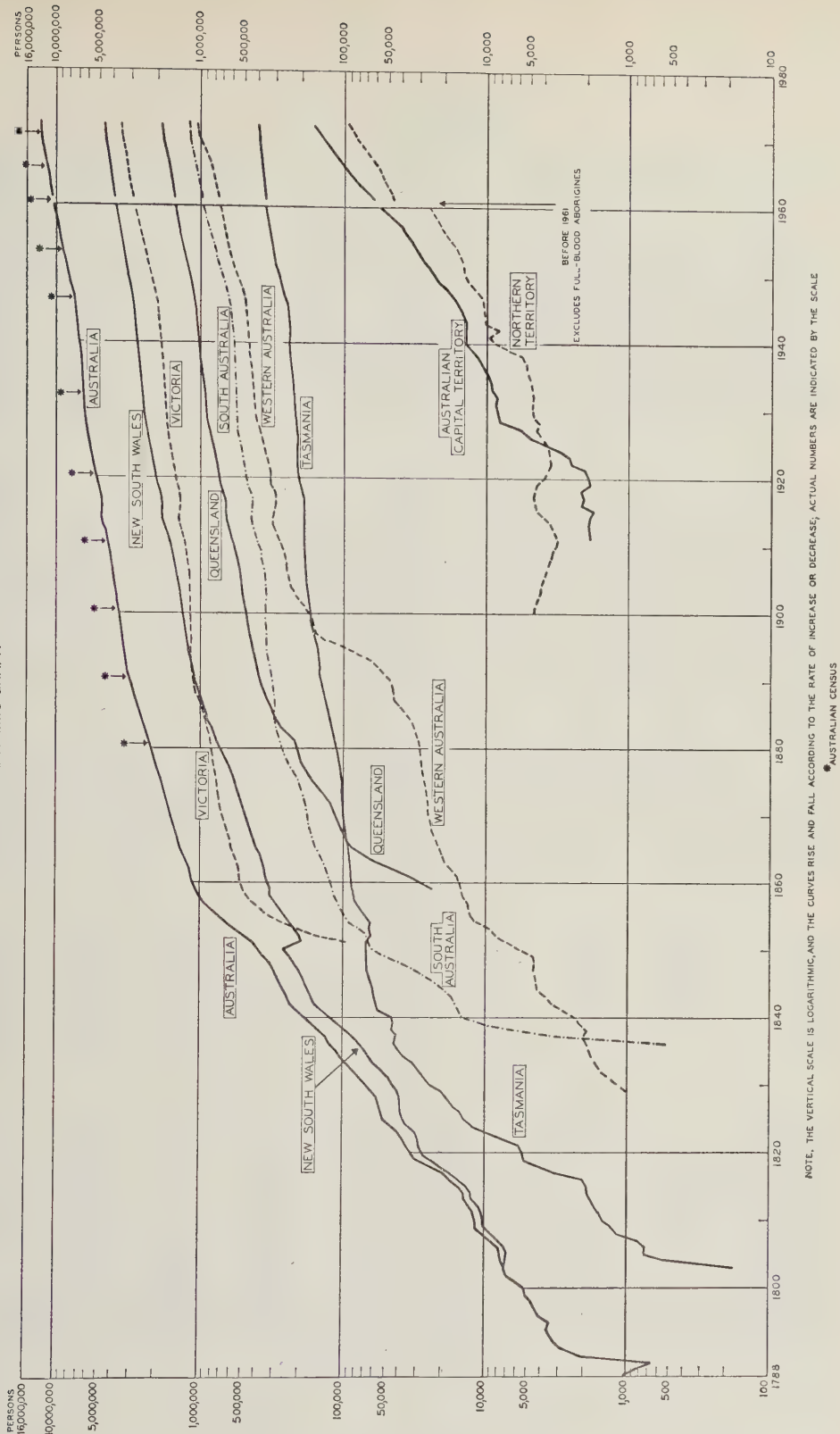
POPULATION, BY SEX: AUSTRALIAN CENSUSES, STATES AND TERRITORIES  
1881 TO 1971

Census	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.(a)	Aust.
MALES									
3 April 1881	410,211	451,623	125,325	146,183	17,062	61,162	3,347	..	1,214,913
5 April 1891	609,666	598,222	223,779	162,241	29,807	77,560	4,560	..	1,705,835
31 March 1901	710,005	603,720	277,003	180,485	112,875	89,624	4,216	..	1,977,928
3 April 1911	857,698	655,591	329,506	207,358	161,565	97,591	2,734	..	2,313,035
4 April 1921	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567	2,762,870
30 June 1933	1,318,471	903,244	497,217	290,962	233,937	115,097	3,378	4,805	3,367,111
30 June 1947	1,492,211	1,013,867	567,471	320,031	258,076	129,244	7,378	9,092	3,797,370
30 June 1954	1,720,860	1,231,099	676,252	403,903	330,358	157,129	10,288	16,229	4,546,118
30 June 1961(b)	1,973,700	1,474,536	779,265	491,406	380,740	177,628	25,052	30,858	5,333,185
30 June 1966(b)	2,126,652	1,614,240	849,390	550,196	432,569	187,391	31,159	49,991	5,841,588
30 June 1971(b)	2,307,210	1,750,061	921,665	586,051	529,066	196,442	48,627	73,589	6,412,711

For footnotes see end of table.

# POPULATION OF AUSTRALIA, 1788 TO 1972

LOGARITHMIC GRAPH





**POPULATION, BY SEX: AUSTRALIAN CENSUSES, STATES AND TERRITORIES**  
1881 TO 1971—*continued*

<i>Census</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.(a)</i>	<i>Aust.</i>
<b>FEMALES</b>									
3 April 1881	339,614	409,943	88,200	130,231	12,646	54,543	104	..	1,035,281
5 April 1891	517,471	541,866	169,939	153,292	19,975	69,107	338	..	1,471,988
31 March 1901	644,841	597,350	221,126	177,861	71,249	82,851	595	..	1,795,873
3 April 1911	789,036	659,960	276,307	201,200	120,549	93,620	576	722	2,141,970
4 April 1921	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005	2,672,864
30 June 1933	1,282,376	917,017	450,317	289,987	204,915	112,502	1,472	4,142	3,262,728
30 June 1947	1,492,627	1,040,834	538,944	326,042	244,404	127,834	3,490	7,813	3,781,988
30 June 1954	1,702,669	1,221,242	642,007	393,191	309,413	151,623	6,181	14,086	4,440,412
30 June 1961(b)	1,944,801	1,455,830	748,249	480,081	366,010	172,712	19,429	27,970	5,215,082
30 June 1966(b)	2,111,249	1,605,977	824,934	544,788	415,531	184,045	25,345	46,041	5,757,910
30 June 1971(b)	2,293,970	1,752,290	905,400	587,656	501,403	193,971	37,763	70,474	6,342,927

<b>PERSONS</b>									
3 April 1881	749,825	861,566	213,525	276,414	29,708	115,705	3,451	..	2,250,194
5 April 1891	1,127,137	1,140,088	393,718	315,533	49,782	146,667	4,898	..	3,177,823
31 March 1901	1,354,846	1,201,070	498,129	358,346	184,124	172,475	4,811	..	3,773,801
3 April 1911	1,646,734	1,315,551	605,813	408,558	282,114	191,211	3,310	1,714	4,455,005
4 April 1921	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
30 June 1933	2,600,847	1,820,261	947,534	580,949	438,852	227,599	4,850	8,947	6,629,839
30 June 1947	2,984,838	2,054,701	1,106,415	646,073	502,480	257,078	10,868	16,905	7,579,358
30 June 1954	3,423,529	2,452,341	1,318,259	797,094	639,771	308,752	16,469	30,315	8,986,530
30 June 1961(b)	3,918,501	2,930,366	1,527,514	971,487	746,750	350,340	44,481	58,828	10,548,267
30 June 1966(b)	4,237,901	3,220,217	1,674,324	1,094,984	848,100	371,436	56,504	96,032	11,599,498
30 June 1971(b)	4,601,180	3,502,351	1,827,065	1,173,707	1,030,469	390,413	86,390	144,063	12,755,638

(a) Part of New South Wales before 1911. (b) Includes Aborigines

**Increase since 1901 census**

**POPULATION: INTERCENSAL INCREASES, STATES AND TERRITORIES**  
1901 TO 1971

<i>State or Territory</i>	<i>1901-1911 (10 years)</i>	<i>1911-1921 (10 years)</i>	<i>1921-1933 (12½ years)</i>	<i>1933-1947 (14 years)</i>	<i>1947-1954 (7 years)</i>	<i>1954-1961 (7 years)</i>	<i>1961-1966(a) (5 years)</i>	<i>1966-1971(a) (5 years)</i>
<b>NUMERICAL INCREASE</b>								
N.S.W.(b)	293,602	453,637	500,476	383,991	438,691	493,484	319,400	363,279
Vic.	114,481	215,729	288,981	234,440	397,640	477,772	289,851	282,134
Qld	107,684	150,159	191,562	158,881	211,844	200,569	146,810	152,741
S.A.	50,212	86,602	85,789	65,124	151,021	172,246	123,497	78,723
W.A.	97,990	50,618	106,120	63,628	137,291	96,858	101,350	182,369
Tas.	18,736	22,569	13,819	29,479	51,674	41,588	21,096	18,977
N.T.	-1,501	557	983	6,018	5,601	10,626	12,023	29,886
A.C.T.(c)	..	858	6,375	7,958	13,410	28,513	37,204	48,031
<b>Australia</b>	<b>681,204</b>	<b>980,729</b>	<b>1,194,105</b>	<b>949,519</b>	<b>1,407,172</b>	<b>1,521,656</b>	<b>1,051,231</b>	<b>1,156,140</b>

**AVERAGE ANNUAL RATE OF INCREASE—PER CENT**

N.S.W.(b)	1.97	2.46	1.76	0.99	1.98	1.94	1.58	1.66
Vic.	0.91	1.53	1.42	0.87	2.56	2.58	1.90	1.69
Qld	1.98	2.24	1.86	1.11	2.53	2.04	1.85	1.76
S.A.	1.32	1.94	1.31	0.76	3.05	2.83	2.42	1.40
W.A.	4.36	1.66	2.29	0.97	3.51	2.03	2.58	3.97
Tas.	1.04	1.12	0.51	0.87	2.65	1.82	1.18	1.00
N.T.	-3.67	1.57	1.87	5.93	6.12	7.37	4.90	8.86
A.C.T.(c)	..	4.14	10.71	4.65	8.70	9.93	10.30	8.45
<b>Australia</b>	<b>1.67</b>	<b>2.01</b>	<b>1.63</b>	<b>0.96</b>	<b>2.46</b>	<b>2.26</b>	<b>1.92</b>	<b>1.92</b>

(a) Includes Aborigines. (b) Includes Australian Capital Territory before 1911. (c) Part of New South Wales before 1911.

Minus sign (—) denotes decrease.

## Population estimates

The estimated population for Australia as a whole takes account of natural increase and net overseas migration since the latest census. The population in each State and Territory is estimated by adding to the population ascertained at the census the recorded natural increase and the net gain from overseas migration for that State or Territory; gains and corresponding losses that result from movements between States and Territories are also taken into account in so far as they are recorded as transfers of residence under child endowment procedures or Commonwealth electoral procedures or are indicated by the results of any special count. As records of migration by State or Territory are not complete, the estimated State and Territory populations so derived are approximate.

Estimates carried forward in this way eventually reach the point when another census is taken, and the numbers so ascertained supersede those resulting from the estimates. In the light of the census results the estimates for the newly completed intercensal period are revised to adjust for the differences between the new census result and the population at the census date estimated on the basis of the previous census. This is to bring intercensal estimates into line with the two census results and thus effect adjustment for unrecorded or inaccurately recorded movement of population in the intercensal period. Such a revision is made when the preliminary (field count) results of a census become available. Further revision may be necessary when the final results of a census become available. The final results of the Census of Population and Housing of 30 June 1971 have been taken into account in the population estimates for dates subsequent to the Census of 30 June 1966.

Final revised estimates become the permanent population estimates. A mean population for twelve month periods is calculated by the method described on page 133. As populations at specific dates are used in these calculations, consequential revisions are made to mean populations when estimates for specific dates are revised as described above.

The method used for estimating State and Territory populations, as described above, is different from that used prior to June 1961 (for particulars *see* Year Book No. 52, page 191). Population estimates subsequent to the 1961 Census are based on a method which excludes holiday, business or other similar short-term movements between States and Territories since the census. As a consequence, marked quarterly seasonal movements in some States due to interstate holiday movements are reflected in population figures prior to 1961 but not for subsequent years. This has some effect on the continuity of the series of mean population figures and should be borne in mind when making calculations which use mean populations as a basis (*see* page 133). Since June 1961 such movements affect the estimates only in so far as people who were on holiday or other short-term interstate travel at the time of the Census are counted in the population of the State or Territory where they spent Census night. However, there are seasonal features in the movement of the populations of States and Territories due to movements of visitors from overseas and of Australians travelling overseas for holiday, business or other similar short-term periods.

### Growth of population

#### ESTIMATED POPULATION(a): STATES AND TERRITORIES DECEMBER, 1945 TO 1972

31 Dec.	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
MALES									
1945	1,464,686	994,784	556,829	312,588	251,590	125,854	7,252	8,283	3,721,866
1950	1,627,618	1,114,497	620,329	364,705	294,758	147,103	9,414	13,021	4,191,445
1955	1,774,382	1,281,891	696,544	423,042	343,838	165,356	11,149	17,615	4,713,817
1960	1,951,907	1,453,815	766,448	483,802	372,665	180,511	14,785	29,140	5,253,073
1965	2,112,610	1,602,058	841,926	544,257	427,330	186,483	30,632	48,333	5,793,629
1968	2,206,900	1,679,213	883,587	566,691	479,938	192,871	39,266	59,719	6,108,185
1969	2,251,495	1,710,586	898,857	574,692	500,378	194,788	42,580	64,962	6,238,338
1970	2,292,534	1,739,916	914,631	584,357	520,174	196,363	46,561	70,341	6,364,877
1971	2,330,339	1,765,554	933,944	591,668	537,781	197,444	50,132	77,534	6,484,396
1972	2,351,260	1,785,499	956,374	596,101	544,918	198,461	53,164	84,568	6,570,345

(a) *See* footnote at end of table.

**ESTIMATED POPULATION(a): STATES AND TERRITORIES  
DECEMBER, 1945 TO 1972—continued**

<i>31 Dec.</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>FEMALES</b>									
1945 .	1,468,312	1,020,323	528,035	318,294	238,498	124,426	3,294	7,149	3,708,331
1950 .	1,613,439	1,122,685	585,089	358,138	277,891	143,230	5,006	10,558	4,116,036
1955 .	1,752,152	1,264,441	662,314	411,619	324,771	159,563	6,803	16,345	4,598,008
1960 .	1,925,354	1,434,475	735,838	473,220	358,368	175,458	10,002	26,132	5,138,847
1965 .	2,098,439	1,593,802	817,497	538,701	410,918	183,125	24,832	44,465	5,711,779
1968 .	2,194,312	1,677,614	864,137	565,446	457,862	190,184	30,957	56,885	6,037,397
1969 .	2,239,270	1,710,592	880,833	574,683	476,242	192,210	33,251	61,798	6,168,879
1970 .	2,281,201	1,742,115	898,153	585,873	493,878	193,890	36,261	67,221	6,298,592
1971 .	2,321,149	1,770,856	918,376	593,827	511,116	195,380	39,437	73,704	6,423,845
1972 .	2,344,780	1,792,281	941,781	600,440	520,845	197,091	43,047	80,687	6,520,952
<b>PERSONS</b>									
1945 .	2,932,998	2,015,107	1,084,864	630,882	490,088	250,280	10,546	15,432	7,430,197
1950 .	3,241,057	2,237,182	1,205,418	722,843	572,649	290,333	14,420	23,579	8,307,481
1955 .	3,526,534	2,546,332	1,358,858	834,661	668,609	324,919	17,952	33,960	9,311,825
1960 .	3,877,261	2,888,290	1,502,286	957,022	731,033	355,969	24,787	55,272	10,391,920
1965 .	4,211,049	3,195,860	1,659,423	1,082,958	838,248	369,608	55,464	92,798	11,505,408
1968 .	4,401,212	3,356,827	1,747,724	1,132,137	937,800	383,055	70,223	116,604	12,145,582
1969 .	4,490,765	3,421,178	1,779,690	1,149,375	976,620	386,998	75,831	126,760	12,407,217
1970 .	4,573,735	3,482,031	1,812,784	1,170,230	1,014,052	390,253	82,822	137,562	12,663,469
1971 .	4,651,488	3,536,410	1,852,320	1,185,495	1,048,897	392,824	89,569	151,238	12,908,241
1972 .	4,696,040	3,577,780	1,898,155	1,196,541	1,065,763	395,552	96,211	165,255	13,091,297

(a) Excludes full-blood Aborigines before 1961. The final results of the Census of 30 June 1971 have been taken into account in the preparation of estimates for dates after the Census of 30 June 1966. See text page 129.

The estimated population at 31 December each year from 1788 to 1946 is shown in *Demography*, Bulletin No. 67, 1949, and for the period 1901 to 1970 in *Demography*, Bulletin No. 86 (see also Statistical Summary in this Year Book). A graph illustrating the growth of the population of Australia and of each State and Territory appears on plate 17, page 127.

**Proportions of area and of population, density and masculinity**

**PROPORTIONS OF AREA AND OF POPULATION: DENSITY AND MASCULINITY  
OF POPULATION: STATES AND TERRITORIES, 31 DECEMBER 1972**

<i>State or Territory</i>	<i>Proportion of total area per cent</i>	<i>Proportion of population, 31 December 1972 (per cent)</i>			<i>Density(a)</i>	<i>Mascu- linity(b)</i>
		<i>Males</i>	<i>Females</i>	<i>Persons</i>		
New South Wales . . . .	10.43	35.79	35.96	35.87	15.18	100.28
Victoria . . . . .	2.96	27.17	27.48	27.33	40.71	99.62
Queensland . . . . .	22.47	14.56	14.44	14.50	2.85	101.55
South Australia . . . . .	12.81	9.07	9.21	9.14	3.15	99.28
Western Australia . . . . .	32.88	8.29	7.99	8.14	1.09	104.62
Tasmania . . . . .	0.89	3.02	3.02	3.02	14.99	100.70
Northern Territory . . . . .	17.53	0.81	0.66	0.74	0.19	123.50
Australian Capital Territory . . . . .	0.03	1.29	1.24	1.26	175.99	104.81
<b>Australia . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>4.41</b>	<b>100.76</b>

(a) Number of persons per square mile. (b) Number of males per 100 females.

NOTE, Additional information about density and masculinity appears later in this chapter.



### Elements of increase

The 'total increase' of the population is obtained by combining 'natural increase', i.e. the excess of births over deaths, with 'net migration', i.e. the excess of arrivals over departures. Comparison of the total increase so obtained with that derived by subtracting the population recorded at one census from that recorded at the next census reveals differences which are attributable partly to differences in the coverage of the census enumerations, and partly to deficiencies in the records of the elements of increase.

In the following table figures for increase in total population include, in addition to the recorded natural increase and net overseas migration gain, adjustments to make the series of increases agree with total intercensal increases revealed by successive censuses (up to the Census of 30 June 1971). The adjustment reflects the combined net error in the recording of births, deaths and migration during the five year period and in the census enumerations.

POPULATION: ELEMENTS OF INCREASE, AUSTRALIA, 1946 TO 1972

Period		Natural increase (a)	Net overseas migration gain(b)	Increase in total population(c)		
				Males	Females	Persons
1946-50	. .	529,447	353,084	469,579	407,705	877,284
1951-55	. .	599,702	413,824	522,372	481,972	1,004,344
1956-60	. .	679,857	405,022	539,256	540,839	1,080,095
1961-65	. .	690,294	399,888	519,623	553,784	1,073,407
1966-70	. .	665,310	543,808	571,248	586,813	1,158,061
1968	. .	131,359	101,970	115,905	117,424	233,329
1969	. .	143,680	117,955	130,153	131,482	261,635
1970	. .	144,468	111,784	126,539	129,713	256,252
1971	. .	165,712	79,060	119,519	125,253	244,772
1972	. .	155,209	27,847	85,949	97,107	183,056

(a) Excess of births registered over deaths registered. From September 1939 to June 1947, deaths of defence personnel whether overseas or in Australia are included. Excludes full-blood Aborigines before 1961. (b) Excess of recorded overseas arrivals over recorded overseas departures. Excludes troop movements for the period September 1939 to June 1947. (c) Increase in total population as recorded at censuses or as estimated for intercensal periods. Excludes full-blood Aborigines before 1961.

### Rate of population growth

In the following two tables natural increase refers to the excess of births over deaths, net migration refers to excess of overseas arrivals over departures (excluding overseas movement of defence personnel for the period of September 1939 to June 1947) and total increase is the sum of natural increase and net migration together with adjustments to make the series of increases agree with total intercensal increases revealed by successive census results (up to the Census of 30 June 1971).

Average annual rates of population growth for periods greater than one year are calculated on the compound interest principle. If  $P_0$  and  $P_t$  are populations at the beginning and end of a  $t$ -year period, and  $r$  is a rate, then  $P_t = P_0 (1 + r)^t$ . The average annual percentage rate of population growth is thus

$$100 \left( \sqrt[t]{\frac{P_t}{P_0}} - 1 \right)$$

The average annual rate of natural increase and net migration is computed by dividing the average annual rate of total increase between its components in proportion to the fraction of total increase due to each component during the period. Differences between the sum of the rates of natural increase and of net migration and the rate of total increase are due to the intercensal adjustment.

Rates of natural increase and net migration are more conventionally shown as rates per 1,000 of mean population. Figures prepared on this basis are shown in the table on page 133. Crude birth and death rates, also calculated as rates per 1,000 of mean population, are shown in Chapter 8 (see pages 166 and 177).

**POPULATION: ANNUAL RATE OF GROWTH, AUSTRALIA  
1946 TO 1972**  
(Per cent)

<i>Period</i>	<i>Natural increase(a)(b)</i>	<i>Net migration</i>	<i>Total increase(b)</i>
<b>Average annual rate—</b>			
1946–50 . . .	1.36	0.91	2.26
1951–55 . . .	1.38	0.95	2.31
1956–60 . . .	1.40	0.83	2.22
1961–65 . . .	1.27	0.74	1.98
1966–70 . . .	1.11	0.91	1.94
<b>Annual rate—</b>			
1968 . . .	1.10	0.95	1.96
1969 . . .	1.18	1.06	2.15
1970 . . .	1.16	0.99	2.07
1971 . . .	1.31	0.67	1.93
1972 . . .	1.20	0.22	1.42

(a) From September 1939 to June 1947, deaths of defence personnel, whether overseas or in Australia, are included. (b) Excludes full-blood Aborigines before 1961.

The average annual rate of population growth during the present century has been 1.73 per cent, but the results from year to year have deviated widely from this figure. In the following table the period 1 January 1901 to 31 December 1972 has been arranged into certain defined groups of years according to the occurrence of influences markedly affecting the growth of population.

**POPULATION(a): PERIODIC RATES OF GROWTH, AUSTRALIA  
1901 TO 1972**

<i>Period</i>	<i>Interval (years)</i>	<i>Total increase (‘000)</i>	<i>Average annual numerical increase (‘000)</i>	<i>Average annual rate of population growth (per cent)</i>		
				<i>Natural increase</i>	<i>Net migration</i>	<i>Total</i>
1901 to 1913 . . .	13	1,128	87	1.55	0.49	2.04
1914 to 1923 . . .	10	862	86	1.49	0.15	1.64
1924 to 1929 . . .	6	680	113	1.26	0.62	1.88
1930 to 1939 . . .	10	569	57	0.82	0.02	0.85
1940 to 1946 . . .	7	513	73	0.98	0.01	1.01
1947 to 1952 . . .	6	1,222	204	1.37	1.19	2.54
1953 to 1961 . . .	9	1,862	207	1.40	0.79	2.17
1962 to 1970 . . .	9	2,021	225	1.16	0.85	1.95
1971 and 1972 . . .	2	428	214	1.25	0.44	1.68

(a) Excludes full-blood Aborigines before 1962.

Up to 1913, the rate of natural increase was rising, and this factor, coupled with the impetus given to immigration from 1911 onwards by increased government assistance, was responsible for the comparatively high annual rate of 2.04 per cent during this period. The 1914–18 War was a dominating influence in the decade 1914–23, and its effects can be seen in the reduction of the rate from 2.04 to 1.64 per cent. From 1924 to 1929, more settled and prosperous conditions were experienced: encouraged migration was resumed on a large scale and, despite a further decline in the rate of natural increase owing to the persistent fall in the birth rate, the annual rate of growth rose to 1.88 per cent. After 1929, came the economic depression, and immigration ceased—in fact, Australia actually lost people through an excess of departures over arrivals in 1930, 1931, 1932 and 1935. The rate of natural increase also fell, and the annual rate of growth of the population fell to 0.85 per cent. With the outbreak of the 1939–45 War, Australia entered a new phase in her demographic history. The immediate effect of the war was to increase the number of marriages and to reverse the downward trend in fertility. The number of births increased each year from 1940 to 1945, and these increases more than offset the rise in deaths due to war casualties and higher civilian death rates. As might be expected, migration over these years was negligible. The period 1947 to 1961 was marked by a continued high natural increase and a resumption of immigration, the latter resulting in very high net

gains in each of the four years 1949 to 1952. During the period 1962 to 1970 net migration has continued at the same rate as in the previous decade but there was a decline in the crude birth rate and rate of natural increase from 1962. In recent years growth has been maintained by high natural increase offsetting a decline in net migration.

Rates of population growth from 1901 are shown for each State and Territory of Australia in the bulletin, *Demography* (see also Statistical Summary in this Year Book). Estimated rates of growth of the population of Australia in comparison with those for other countries of the world for the period 1963-1971 are shown in the table on page 148.

**RATES OF NATURAL INCREASE AND NET  
MIGRATION(a): AUSTRALIA, 1946 TO 1972**

Period	Rate of natural increase(b)	Rate of net migration
Average annual rate—		
1946-50 . . . . .	13.63	8.96
1951-55 . . . . .	13.61	9.18
1956-60 . . . . .	13.81	8.13
1961-65 . . . . .	12.60	6.90
1966-70 . . . . .	11.05	8.18
Annual rate—		
1968 . . . . .	10.93	9.40
1969 . . . . .	11.71	10.51
1970 . . . . .	11.53	9.81
1971 . . . . .	12.96	6.62
1972 . . . . .	11.95	2.14

(a) Natural increase or net migration during each period per thousand of mean population for the period. (b) From September 1939 to June 1947, deaths of defence personnel, whether overseas or in Australia, are included. Excludes full-blood Aborigines before 1961.

**Mean population**

The mean populations given below are calculated for twelve-month periods to provide an average basis for calculations requiring allowance for the continuous change in population figures during such periods. Mean populations are used for the calculation of rates such as crude birth, death and marriage rates and per capita rates of consumption, income, etc.

The mean population for any year has been calculated by the formula:

$$\text{Mean population} = \frac{a + 4b + 2c + 4d + e}{12}$$

where *a*, *b*, *c*, *d*, and *e*, respectively, are the populations at the end of the quarter immediately preceding the year and at the end of each of the four succeeding quarters; e.g. in the case of a calendar year, 31 December of the preceding year, and 31 March, 30 June, 30 September and 31 December of the year under consideration. This formula gives a close approximation to the mean of a theoretical population progressing smoothly through the five values *a*, *b*, *c*, *d*, and *e*.

**MEAN POPULATION: CALENDAR YEARS, STATES AND TERRITORIES, 1968 TO 1972**

Year ended 31 Dec.—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968 .	4,364,219	3,328,451	1,730,614	1,122,758	915,757	379,916	67,558	112,173	12,021,446
1969 .	4,445,959	3,388,417	1,764,206	1,140,015	955,660	385,079	73,137	121,645	12,274,118
1970 .	4,530,444	3,450,523	1,795,394	1,158,623	994,201	388,180	79,301	131,851	12,528,517
1971 .	4,611,705	3,510,006	1,830,463	1,176,483	1,031,614	391,242	86,643	144,269	12,782,425
1972 .	4,673,039	3,555,468	1,873,218	1,189,378	1,056,508	393,183	93,110	158,337	12,992,241

**MEAN POPULATION: FINANCIAL YEARS, STATES AND TERRITORIES, 1967-68 TO 1971-72**

Year ended 30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968 .	4,329,823	3,302,366	1,715,376	1,115,676	896,761	377,582	64,635	107,777	11,909,996
1969 .	4,402,499	3,356,773	1,747,372	1,131,384	935,985	382,710	70,434	116,812	12,143,969
1970 .	4,490,009	3,420,609	1,779,988	1,149,134	975,063	386,665	76,068	126,637	12,404,173
1971 .	4,571,920	3,481,370	1,812,297	1,168,115	1,013,455	389,739	82,996	137,605	12,657,497
1972 .	4,646,786	3,534,628	1,850,988	1,183,704	1,046,627	392,399	89,878	151,263	12,896,273



## Geographic distribution of population

### Criteria for the delimitation of urban boundaries

The criteria used for delimiting urban centres, were determined by the Thirty-First Conference of Statisticians, October 1969, and are as follows.

At each Census of Population and Housing a boundary shall be defined in accordance with these Resolutions for each population cluster of 1,000 or more population (and, for known holiday resorts of less population, if they contain 250 or more dwellings of which at least 100 are occupied). These clusters shall be named *urban centres* and the population and dwellings enumerated in them shall be classified as urban for statistical purposes.

Resolution 3 stated that around each urban centre with a population of at least 100,000, a further boundary shall be defined, after consultation with planners, to contain the anticipated development of the urban centre and associated smaller urban centres for a period of at least twenty years. Such a boundary should delimit an area which is now, or is expected to be, socially and economically oriented towards the urban centre. It shall consist of complete local government areas if possible. This fixed boundary (as distinct from the urban boundary which is moving) will delimit an area which, for general statistical purposes, is free from the practical problems imposed by the moving boundary, but which nevertheless represents the city in a wider sense.

#### In delimiting urban centres with 25,000 or more population:

- (a) all contiguous census collector's districts which have a population density of 500 or more persons per square mile shall be included. Consequently, State, statistical division, local government area and other administrative boundaries shall be disregarded;
- (b) a collector's district which is known to contain a high proportion of holiday homes shall be classified as urban if the dwelling density is 125 dwellings per square mile or greater;
- (c) a collector's district consisting mainly of land used for factories, airports, small sports areas, cemeteries, hostels, institutions, prisons, military camps or certain research stations shall be classified as urban if contiguous with collector's districts which are themselves urban;
- (d) any collector's district which consists mainly of land used for large sporting areas, large parks, explosives handling and munitions areas, or holding yards associated with meatworks and abattoirs shall be classified as urban only if it is bordered on three sides by collector's districts which are themselves urban;
- (e) any area which is completely surrounded by collector's districts which are urban must itself be classified as urban;
- (f) where an urban centre of 25,000 or more population is separated from another urban centre by a gap in actual development of less than two miles (by the shortest rail or road distance), the gap shall be bridged by classifying a connecting collector's district or districts as urban, and therefore treating the urban centres as one; if the gap is two or more miles (and whether or not it is comprised mainly of reserved land or a natural barrier) the urban centres shall remain separate;
- (g) any area included in an urban centre in 1971 or thereafter under the provisions of this Resolution shall continue to be so included unless the population of the urban centre falls below 25,000, in which case this Resolution will cease to apply;
- (h) large peripheral collector's districts in growth areas shall be fragmented; and so far as the availability of visible boundary features allows, the fragments so created shall be as near square-shaped as possible and of such a size that they will contain a collector's workload when fully developed. For the purposes of delimiting urban centres such fragments shall be regarded as collector's districts.

#### In delimiting urban centres with less than 25,000 population:

- (a) the urban centres shall be delimited subjectively (by the inspection of aerial photographs, by field inspection and/or by consideration of any other information that is available);
- (b) all continuous urban growth is to be included (which, in small urban centres, would not necessarily occur if the density criterion were applied), together with any close but non-contiguous development which could be clearly regarded as part of the centre. However, cognisance shall be taken of Resolution 3 (*see above*), where appropriate, particularly in urban centres which are approaching a population of 25,000.

In selecting the boundaries for the splitting of collector's districts, cognisance shall be taken, where appropriate, of the boundaries of land-use zones;

- (a) For State capital cities, nomenclature for the area delimited by—
  - (i) the urban, and
  - (ii) the outer boundary

shall be (using Melbourne as the example)—

- (i) Urban Melbourne, and
- (ii) Melbourne Statistical Division;
- (b) In other cases where the dual boundary concept is employed, the nomenclature shall be (using Newcastle as the example)—
  - (i) Urban Newcastle, and
  - (ii) Newcastle Statistical District;
- (c) In cases where only a single boundary is delineated, the nomenclature shall be (using Cairns as the example) Urban Cairns;
- (d) Where an urban centre is formed by the coalescence of two or more named localities, the urban centre shall be assigned a name agreed upon after consultation with the Deputy Commonwealth Statistician of the State concerned.

These criteria were similar to those used at the 1966 Census, the main changes being:

- (a) the elimination of the 'indentation' provision. At the 1966 Census an indented area was included within the urban centre if the distance across the 'neck' was less than one mile;
- (b) a re-interpretation of the 'enclosure' rule. At the 1966 Census land was included within the urban centre if it was completely surrounded by the urban centre itself (or in part by the sea or a wide unbridged river). In 1971, if one part of this surround was the sea or a wide unbridged river this rule was not applied.

At the 1971 Census these concepts were used to determine the urban boundaries of all those centres expected to reach 25,000 population in 1971. These were Sydney, Broken Hill, Maitland, Newcastle, Tamworth, Wagga Wagga, Gosford-Woy Woy and Wollongong in New South Wales; Albury-Wodonga, which is in both New South Wales and Victoria; Melbourne, Geelong, Ballarat and Bendigo in Victoria; Brisbane, Bundaberg, Cairns, Mackay, Rockhampton, Toowoomba and Townsville in Queensland; Gold Coast, which is in both New South Wales and Queensland; Adelaide and Whyalla in South Australia; Perth in Western Australia; Hobart and Launceston in Tasmania; Canberra, which is in both the Australian Capital Territory and New South Wales; and Darwin in the Northern Territory.

A change in nomenclature has been made with the introduction of the term *major urban* in place of *metropolitan*. At the 1966 Census, the latter covered the capital city urban areas. At the 1971 Census *major urban* covers population living in urban centres of 100,000 or more population. Thus in New South Wales the term covers urban population in Sydney, Newcastle, Wollongong and that part of the Municipality of Queanbeyan which is included in Urban Canberra. In Victoria it refers to the urban population in Melbourne and Geelong, and in other States the capital city urban population.

The population classified as *rural* at the 1971 Census comprises those persons who were not enumerated in urban centres and who were not classified as *migratory*. The migratory population comprises those persons who, on the night of 30 June, were travelling on board ships in Australian ports, or on board ships travelling between Australian ports, or were enumerated on long-distance trains, motor coaches, or on aircraft.

#### URBAN AND RURAL POPULATION(a): STATES AND TERRITORIES, CENSUS 30 JUNE 1971

Division	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
PERSONS									
Major urban	3,176,980	2,509,298	818,423	809,482	641,800	129,928	..	140,864	8,226,775
Other urban	897,600	562,830	629,601	183,187	198,395	159,652	55,411	..	2,686,676
<i>Total urban</i>	<i>4,074,580</i>	<i>3,072,128</i>	<i>1,448,024</i>	<i>992,669</i>	<i>840,195</i>	<i>289,580</i>	<i>55,411</i>	<i>140,864</i>	<i>10,913,451</i>
Rural	520,641	427,920	375,376	179,148	187,657	100,418	30,605	3,199	1,824,964
Migratory	5,959	2,303	3,665	1,890	2,617	415	374	..	17,223
<i>Total</i>	<i>4,601,180</i>	<i>3,502,351</i>	<i>1,827,065</i>	<i>1,173,707</i>	<i>1,030,469</i>	<i>390,413</i>	<i>86,390</i>	<i>144,063</i>	<i>12,755,638</i>
PERCENTAGES									
Major urban	69.05	71.65	44.79	68.97	62.28	33.28	..	97.78	64.50
Other urban	19.51	16.07	34.46	15.61	19.25	40.89	64.14	..	21.06
<i>Total urban</i>	<i>88.56</i>	<i>87.72</i>	<i>79.25</i>	<i>84.58</i>	<i>81.53</i>	<i>74.17</i>	<i>64.14</i>	<i>97.78</i>	<i>85.56</i>
Rural	11.32	12.22	20.55	15.26	18.21	25.72	35.43	2.22	14.31
Migratory	0.13	0.07	0.20	0.16	0.25	0.11	0.43	..	0.14
<i>Total</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>

(a) Includes Aborigines. For definition of urban, rural, etc., see explanation preceding this table.

**Classification of urban centres by size**

The following table classifies the urban centres in Australia into grades of size of population at the Censuses of 30 June 1966 and 1971. Corresponding details for each State and Territory at the 1966 Census were included in Year Book No. 54, page 127.

A table showing the aggregate urban population at the 1961 Census of all cities and towns outside the metropolitan area of each State with 2,000 or more, and 3,000 or more, urban inhabitants was included in Year Book No. 51, page 267. A table showing similar data for the 1954 Census was included in Year Book No. 47, page 295 and one for the 1947 Census in Year Book No. 40, page 334. Comparisons between these various tables can be made only if allowance is made for changes in the status and structure of local government areas and for changes in the manner of determining urban population at each census.

**URBAN CENTRES: NUMBER AND POPULATION(a) IN GROUPS OF VARIOUS SIZES:  
AUSTRALIA, CENSUSES 1966 AND 1971**

<i>Population size of urban centres</i>	<i>Census, 30 June 1966</i>			<i>Census, 30 June 1971</i>		
	<i>No. of urban centres</i>	<i>Population</i>	<i>Percentage of Australian population</i>	<i>No. of urban centres</i>	<i>Population</i>	<i>Percentage of Australian population</i>
500,000 and over . . . . .	5	6,500,547	56.04	5	7,388,886	57.93
100,000-499,999 . . . . .	4	620,705	5.35	5	837,889	6.57
75,000- 99,999 . . . . .	1	92,311	0.80	..	..	..
50,000- 74,999 . . . . .	5	279,031	2.41	5	321,270	2.52
25,000- 49,999 . . . . .	6	205,983	1.78	12	408,751	3.20
20,000- 24,999 . . . . .	11	246,891	2.13	8	177,712	1.39
15,000- 19,999 . . . . .	16	269,449	2.32	16	276,541	2.17
10,000- 14,999 . . . . .	18	214,369	1.85	22	259,992	2.04
5,000- 9,999 . . . . .	62	450,173	3.88	66	467,184	3.66
2,500- 4,999 . . . . .	101	351,765	3.03	110	378,964	2.97
2,000- 2,499 . . . . .	51	112,983	0.97	52	115,700	0.91
1,000- 1,999 . . . . .	178	253,923	2.19	180	257,922	2.02
Less than 1,000(b) . . . . .	27	18,873	0.16	38	24,624	0.19
<b>Total urban population</b>	<b>485</b>	<b>9,617,003</b>	<b>82.91</b>	<b>519</b>	<b>10,915,435</b>	<b>85.57</b>
<b>Cumulative—</b>						
500,000 and over . . . . .	5	6,500,547	56.04	5	7,388,886	57.93
100,000 " " " . . . . .	9	7,121,252	61.39	10	8,226,775	64.50
75,000 " " " . . . . .	10	7,213,563	62.19	10	8,226,775	64.50
50,000 " " " . . . . .	15	7,492,594	64.59	15	8,548,045	67.01
25,000 " " " . . . . .	21	7,698,577	66.37	27	8,956,796	70.22
20,000 " " " . . . . .	32	7,945,468	68.50	35	9,134,508	71.61
15,000 " " " . . . . .	48	8,214,917	70.82	51	9,411,049	73.78
10,000 " " " . . . . .	66	8,429,286	72.67	73	9,671,041	75.81
5,000 " " " . . . . .	128	8,879,459	76.55	139	10,138,225	79.48
2,500 " " " . . . . .	229	9,231,224	79.58	249	10,517,189	82.45
2,000 " " " . . . . .	280	9,344,207	80.56	301	10,632,889	83.36
1,000 " " " . . . . .	458	9,598,130	82.75	481	10,890,811	85.39
<b>Total urban population</b>	<b>485</b>	<b>9,617,003</b>	<b>82.91</b>	<b>519</b>	<b>10,915,435</b>	<b>85.57</b>

(a) Includes Aborigines.

(b) Urban centres classified as such on grounds other than population and density.

**Selected population centres**

The following table shows the population of selected population centres in each State and Territory of Australia at the censuses of 30 June 1966 and 1971.

At the Census of 30 June 1966 new methods were used to define the boundaries of capital city and other urban areas for statistical purposes. These methods, and modifications made for the 1971 Census, are described on pages 134-5.

Annual post-censal population estimates are made for all local government areas. Copies of publications showing the estimated population of local government areas, statistical divisions and statistical districts can be obtained from the office of the Deputy Commonwealth Statistician in each capital city.

For the urban centres recognised at the census but not definable in terms of local government area boundaries, only a few post-censal estimates are available. For the capital cities and for some other cities and towns the definition of urban boundaries has resulted in the urban population as delineated at the 1971 Census being significantly larger than the population within the corresponding local government area of the same name. For further details see also *Field Count Statements Nos. 3-9, Census of Population and Housing, 30 June 1971.*



**SELECTED POPULATION CENTRES EXCEEDING 10,000 URBAN POPULATION  
STATES AND TERRITORIES, CENSUSES, 30 JUNE 1971 AND 1972**

Local Government Area(a)	Urban population, 30 June 1971 (b)	Population of Statistical Division/ District or local government area at 30 June		Local Government Area(a)	Urban population, 30 June 1971 (b)	Population of Statistical Division/ District or local government area at 30 June	
		1971 (b)	1972			1971 (b)	1972
<b>NEW SOUTH WALES—</b>				<b>VICTORIA—continued</b>			
Sydney Statistical Division(c) . . . . .		2,807,828	2,850,630	Sale (City) . . . . .	10,436	10,436	10,640
Urban Sydney . . . . .	2,725,064	..	..	Shepparton (City) . . . . .	19,410	19,410	19,780
Urban Richmond—Windsor . . . . .	11,389	..	..	Traralgon (City) . . . . .	14,666	14,666	14,750
Newcastle Statistical District(c) . . . . .		351,536	354,630	Wangaratta (City) . . . . .	15,586	15,586	15,620
Urban Newcastle . . . . .	250,346	..	..	Warrnambool (City) . . . . .	18,684	18,684	19,010
Urban Cessnock—Bellbird . . . . .	16,160	..	..	Wodonga . . . . .	10,528	13,074	13,150
Urban Kurri Kurri—Weston . . . . .	11,613	..	..	<b>QUEENSLAND—</b>			
Urban Maitland . . . . .	24,537	..	..	Brisbane Statistical Division(c)(j) . . . . .		867,784	888,000
Wollongong Statistical District(c) . . . . .		199,048	202,830	Urban Brisbane . . . . .	818,423	..	..
Urban Wollongong . . . . .	186,136	..	..	Bundaberg . . . . .	26,516	27,324	27,650
Albury . . . . .	(d)27,403	28,420	29,220	Cairns . . . . .	32,747	30,226	31,250
Armidale . . . . .	18,156	18,156	18,660	Gladstone . . . . .	15,574	15,166	15,750
Bathurst . . . . .	17,196	17,196	17,500	Gold Coast . . . . .	(k)69,120	66,697	71,400
Blue Mountains (part)(e) . . . . .	..	18,438	18,790	Gympie . . . . .	11,096	11,096	11,150
Urban Katoomba—Wentworth Falls . . . . .	11,620	..	..	Mackay . . . . .	28,554	19,148	19,250
Broken Hill . . . . .	29,808	29,808	29,310	Maryborough . . . . .	19,916	19,257	19,150
Coff's Harbour . . . . .	10,088	18,633	19,530	Mount Isa . . . . .	25,497	26,502	29,000
Dubbo . . . . .	17,810	17,810	18,190	Rockhampton . . . . .	48,213	49,164	49,800
Gosford(f) . . . . .	..	56,373	58,970	Toowoomba . . . . .	57,578	59,524	60,300
Urban Gosford—Woy Woy . . . . .	38,205	..	..	Townsville . . . . .	68,591	71,265	73,500
Goulburn . . . . .	21,606	21,606	21,740	<b>SOUTH AUSTRALIA—</b>			
Grafton . . . . .	16,387	16,387	16,460	Adelaide Statistical Division(c) . . . . .		842,693	p855,300
Lismore . . . . .	20,904	20,904	21,100	Urban Adelaide . . . . .	809,482	..	..
Lithgow . . . . .	13,146	12,825	12,800	Mount Gambier (City) . . . . .	17,934	17,386	p17,250
Orange . . . . .	24,185	23,172	23,520	Port Augusta . . . . .	12,224	12,224	p12,650
Queanbeyan(g) . . . . .	..	16,058	16,960	Port Pirie . . . . .	15,456	13,227	p12,850
Urban Canberra (part) . . . . .	15,434	..	..	Whyalla . . . . .	32,109	31,570	p32,800
Shoalhaven . . . . .	..	28,570	29,920	<b>WESTERN AUSTRALIA—</b>			
Urban Nowra—Bomaderry . . . . .	12,873	..	..	Perth Statistical Division(c) . . . . .		703,199	724,800
Tamworth . . . . .	24,665	24,092	24,440	Urban Perth . . . . .	641,800	..	..
Taree . . . . .	14,110	11,493	11,650	Urban Kwinana—New Town . . . . .	10,108	..	..
Wade . . . . .	..	18,813	18,980	Urban Rockingham . . . . .	12,029	..	..
Urban Griffith . . . . .	11,031	..	..	Albany . . . . .	13,101	12,482	12,650
Wagga Wagga . . . . .	27,719	28,905	29,510	Bunbury . . . . .	17,779	17,779	18,650
Wyang . . . . .	..	32,967	34,770	Geraldton . . . . .	15,457	15,118	15,450
Urban Budgewoi . . . . .	..	..	..	Kalgoorlie . . . . .	..	9,201	9,300
Lake . . . . .	10,245	..	..	Boulder . . . . .	..	12,922	13,100
Urban The Entrance . . . . .	13,728	..	..	Urban Kalgoorlie—Boulder . . . . .	20,865	..	..
<b>VICTORIA—</b>				<b>TASMANIA—</b>			
Melbourne Statistical Division(c) . . . . .		2,503,450	2,544,400	Hobart Statistical Division(c) . . . . .		153,216	154,720
Urban Melbourne . . . . .	2,394,117	..	..	Urban Hobart(f) . . . . .	129,928	..	..
Urban Werribee . . . . .	12,872	..	..	Burnie . . . . .	..	19,954	20,240
Geelong Statistical District(c) . . . . .		122,087	124,550	Urban Burnie—Somerset(f) . . . . .	20,087	..	..
Urban Geelong . . . . .	115,181	..	..	Devonport(f) . . . . .	18,183	19,802	20,290
Ballaarat (City) . . . . .	58,620	39,778	39,290	Launceston(f) . . . . .	62,241	35,107	34,780
Ballaarat . . . . .	..	14,405	15,050	<b>NORTHERN TERRITORY—</b>			
Bendigo . . . . .	45,936	32,007	32,210	Darwin(m) . . . . .	35,516	37,060	40,885
Colac (City) . . . . .	10,362	9,679	9,730	Alice Springs . . . . .	11,179	11,179	12,397
Horsham . . . . .	11,045	11,045	11,040	<b>AUSTRALIAN CAPITAL TERRITORY—</b>			
Mildura (City) . . . . .	13,198	13,198	(h)14,240	Canberra Statistical District(n) . . . . .	..	158,880	174,100
Moe . . . . .	..	15,605	15,480	Urban Canberra (part)(o) . . . . .	140,864	..	..
Urban Moe—Yallourn . . . . .	20,863	..	..				
Morwell . . . . .	16,853	(i)22,443	(i)22,540				

(a) Unless otherwise indicated as 'Statistical Division', 'Statistical District' or 'Urban'. (b) Population at Census date. (c) The population of all component local government areas may be obtained from the relevant publication issued by the office of the Deputy Commonwealth Statistician of the State concerned. (d) That part of urban Albury-Wodonga in New South Wales. The total population of urban Albury-Wodonga was 37,931 at 30 June 1971. (e) That part of Blue Mountains which lies outside Sydney Statistical Division. (f) Includes part (299 persons at 30 June 1971) of The Entrance urban centre. (g) Included in Canberra Statistical District. (h) In October 1971 the boundary of Mildura City was extended to include part of the adjoining shire, involving a gain of 989 persons. (i) Includes part (229 persons at 30 June 1971) of Urban Moe-Yallourn. (j) Includes Ipswich; the population of the City of Ipswich was 63,000 at 30 June 1972. (k) That part of urban Gold Coast in Queensland. The total population of urban Gold Coast was 74,240 at 30 June 1971. (l) The estimated populations at 30 June 1972 of urban centres (as delineated at 30 June 1971) are: Hobart 130,980; Burnie-Somerset, 20,380; Devonport, 18,630; Launceston, 62,250. (m) Figures given for local government area are for the proposed Greater Darwin area. (n) Includes Queanbeyan in New South Wales. (o) That part of urban Canberra in the Australian Capital Territory. Population figures for Canberra City District are: 141,795 at 30 June 1971 and 156,100 at 30 June 1972.

## Principal cities of the world

The following table shows the population of the world's largest cities at the latest available date. The data refer to urban agglomerations, where available; in other cases the so-called city proper. The urban agglomeration is defined on page 23 of the United Nations *Demographic Yearbook* 1971, from which most of the figures in the table have been taken, as including also the suburban fringe or thickly settled territory lying outside of, but adjacent to, the city boundaries. (See also the Technical Notes on Statistical Tables and footnotes to the table in the *Demographic Yearbook*). International comparability is limited by different methods used in constructing the estimates, variations in national concepts of urban boundaries, and the different dates to which the statistics refer.

## POPULATION OF THE WORLD'S LARGEST CITIES

City	Country	Year	Population ('000)	City	Country	Year	Population ('000)
New York . . .	U.S.A. . .	1970	11,572	Boston . . .	U.S.A. . .	1970	2,754
Tokyo . . .	Japan . . .	1969	11,454	Teheran . . .	Iran . . .	1966	(a)2,720
Shanghai . . .	China . . .	1970	(a)10,820	Santiago . . .	Chile . . .	1970	2,662
Buenos Aires . . .	Argentina . . .	1970	8,353	Montreal . . .	Canada . . .	1969	2,553
Paris . . .	France . . .	1968	8,197	Lima . . .	Peru . . .	1970	2,541
Peking . . .	China . . .	1970	(a)7,570	Melbourne . . .	Australia . . .	1972	(b)2,544
London . . .	England . . .	1972	7,354	Madras . . .	India . . .	1971	2,470
Moscow . . .	U.S.S.R. . .	1971	7,172	Shenyang . . .	China . . .	1957	(a)2,411
Los Angeles . . .	U.S.A. . .	1970	7,032	Pittsburg . . .	U.S.A. . .	1970	2,401
Calcutta . . .	India . . .	1971	7,005	Manchester . . .	England . . .	1972	2,389
Chicago . . .	U.S.A. . .	1970	6,979	Birmingham . . .	England . . .	1972	2,364
Bombay . . .	India . . .	1971	(a)5,969	St Louis . . .	U.S.A. . .	1970	2,363
Seoul . . .	Korea . . .	1970	(a)5,536	Toronto . . .	Canada . . .	1969	2,316
Sao Paulo . . .	Brazil . . .	1970	(a)5,187	Bogota . . .	Columbia . . .	1969	(a)2,294
Cairo . . .	U.A.R. . .	1970	(a)4,961	Yokohama . . .	Japan . . .	1970	2,238
Philadelphia . . .	U.S.A. . .	1970	4,818	Caracas . . .	Venezuela . . .	1970	2,175
Djakarta . . .	Indonesia . . .	1971	(a)4,576	Wuhan . . .	China . . .	1957	(a)2,146
Tientsin . . .	China . . .	1970	(a)4,280	West Berlin(c) . . .	Germany . . .	1969	(a)2,134
Rio de Janeiro . . .	Brazil . . .	1970	(a)4,252	Chungking . . .	China . . .	1957	(a)2,121
Detroit . . .	U.S.A. . .	1970	4,200	Singapore . . .	Singapore . . .	1970	2,075
Leningrad . . .	U.S.S.R. . .	1971	4,002	Cleveland . . .	U.S.A. . .	1970	2,064
Delhi . . .	India . . .	1971	3,630	Baltimore . . .	U.S.A. . .	1970	2,045
Karachi . . .	Pakistan . . .	1971	3,442	Istanbul . . .	Turkey . . .	1965	2,043
Madrid . . .	Spain . . .	1970	3,146	Nagoya . . .	Japan . . .	1970	2,036
San Francisco . . .	U.S.A. . .	1970	3,110	Alexandria . . .	U.A.R. . .	1970	(a)2,032
Mexico City . . .	Mexico . . .	1970	3,026	Lahore . . .	Pakistan . . .	1971	1,986
Osaka . . .	Japan . . .	1970	2,980	Houston . . .	U.S.A. . .	1970	1,985
Washington . . .	U.S.A. . .	1970	2,861	Vereeniging . . .	South Africa . . .	1970	1,970
Sydney . . .	Australia . . .	1972	(b)2,851	Budapest . . .	Hungary . . .	1970	1,940
Rome . . .	Italy . . .	1970	2,755	Pusan . . .	Korea . . .	1970	1,881

(a) City proper.

(b) Statistical Division.

(c) East Berlin, 1970, population of city proper, 1,083,728.

## Sex distribution of the population

The number of males to each hundred females has been adopted as a measure of the 'masculinity' of the population. With the exception of some dislocation arising from the two World Wars, there was a continuous diminution of the masculinity of the population until 1945. This resulted mainly from a decline in the proportion of overseas-born in the population and in their masculinity. At the census of 1901 the overseas-born comprised 23 per cent of the population and had a masculinity of 151 per cent. By 1947 these proportions had declined to 10 per cent and 127 per cent, with a consequent decline in the masculinity of the total population. Although the proportion of overseas-born has increased since 1947, with the resumption of immigration, its masculinity has declined and there has thus been little change in the masculinity of the total population.

POPULATION(a): MASCULINITY, STATES AND TERRITORIES, DECEMBER 1945 TO 1972  
(Number of males per 100 females)

31 Dec.—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1945 . . .	99.75	97.50	105.45	98.21	105.49	101.15	220.16	115.86	100.36
1950 . . .	100.88	99.27	106.02	101.83	106.07	102.70	188.05	123.33	101.83
1955 . . .	101.27	101.38	105.17	102.78	105.87	103.63	163.88	107.77	102.52
1960 . . .	101.38	101.35	104.16	102.24	103.99	102.88	147.82	111.51	102.22
1965 . . .	100.68	100.52	102.99	101.03	103.99	101.83	123.36	108.70	101.43
1968 . . .	100.57	100.10	102.25	100.22	104.82	101.41	126.84	104.98	101.17
1969 . . .	100.55	100.00	102.05	100.00	105.07	101.34	128.06	105.12	101.13
1970 . . .	100.50	99.87	101.83	99.74	105.32	101.28	128.41	104.64	101.05
1971 . . .	100.40	99.70	101.70	99.64	105.22	101.06	127.12	105.20	100.94
1972 . . .	100.28	99.62	101.55	99.28	104.62	100.70	123.50	104.81	100.76

(a) Excludes full-blood Aborigines before 1961.

The masculinity of the population in certain countries of the world is shown in the table on page 148.

### Age distribution of the population

The next table shows the changes which have taken place in the age distribution of the population of Australia at each census since 1871.

**POPULATION: PROPORTIONAL AGE DISTRIBUTION, AUSTRALIA 1871 TO 1971**  
(Per cent)

Census	Males				Females				Persons			
	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total
1871 .	38.84	59.11	2.05	100	46.02	52.60	1.38	100	42.09	56.17	1.74	100
1881 .	36.43	60.78	2.79	100	41.91	56.04	2.04	100	38.95	58.60	2.44	100
1891 .	34.82	61.96	3.22	100	39.40	58.03	2.57	100	36.94	60.14	2.92	100
1901 .	33.89	61.78	4.33	100	36.52	59.82	3.66	100	35.14	60.85	4.01	100
1911 .	30.89	64.74	4.37	100	32.49	63.27	4.24	100	31.66	64.03	4.31	100
1921 .	31.67	63.86	4.46	100	31.80	63.83	4.37	100	31.73	63.85	4.42	100
1933 .	27.53	66.09	6.38	100	27.42	65.99	6.59	100	27.48	66.04	6.48	100
1947 .	25.48	67.08	7.43	100	24.62	66.71	8.67	100	25.06	66.90	8.05	100
1954 .	28.81	63.82	7.37	100	28.23	62.52	9.25	100	28.52	63.17	8.30	100
1961 .	30.61	62.16	7.23	100	29.85	60.34	9.82	100	30.23	61.26	8.51	100
1966(a) .	29.93	62.98	7.09	100	28.92	61.10	9.99	100	29.43	62.05	8.53	100
1971(a) .	29.32	63.71	6.97	100	28.21	62.04	9.75	100	28.77	62.88	8.35	100

(a) Includes full-blood Aborigines.

Estimates of the age distribution of population, based on the census distribution of ages and records of births, ages at death, and ages of migrants, are made for intercensal years. The following estimated age distribution of the Australian population at 30 June 1972 will be subject to revision when the 1976 Census results for distribution of ages become available.

**POPULATION: ESTIMATED AGE DISTRIBUTION(a)**  
**AUSTRALIA, 30 JUNE 1972**

Age last birthday (years)	30 June 1972		
	Males	Females	Persons
0-4 . . .	645,029	618,371	1,263,400
5-9 . . .	617,216	585,537	1,202,753
10-14 . . .	638,345	607,300	1,245,645
15-19 . . .	583,509	558,684	1,142,193
20-24 . . .	563,927	537,919	1,101,846
25-29 . . .	513,862	485,391	999,253
30-34 . . .	425,019	399,312	824,331
35-39 . . .	380,193	361,417	741,610
40-44 . . .	403,036	375,151	778,187
45-49 . . .	396,738	380,082	776,820
50-54 . . .	343,448	339,954	683,402
55-59 . . .	301,113	305,834	606,947
60-64 . . .	248,695	263,559	512,254
65-69 . . .	187,146	209,193	396,339
70-74 . . .	126,772	169,105	295,877
75-79 . . .	75,024	124,617	199,641
80-84 . . .	42,626	77,853	120,479
85 and over . . .	21,047	47,060	68,107
<b>Total . . .</b>	<b>6,512,745</b>	<b>6,446,339</b>	<b>12,959,084</b>

(a) Based on the age distribution of all persons enumerated at the Census of 30 June 1971 adjusted for mis-statement of age and on subsequent births, recorded ages at death and recorded ages of migrants.

### General characteristics of the population, censuses 1966 and 1971

Particulars of the characteristics of the population of Australia at the 1971 Census compared with the 1966 Census are shown in this section. Information from the 1966 Census for the individual States and Territories is shown in Year Book No. 54. Information concerning the industry, occupational status, and occupations of the population as recorded at the 1971 Census is given in the chapter Employment and Unemployment, and on dwellings in the chapter Housing and Building.



The characteristics dealt with in the following pages are: age; marital status; country of birth; period of residence in Australia of overseas born; nationality; religion. Further details are available in a series of bulletins which are available from the Bureau. All tables include particulars of full-blood Aborigines.

**POPULATION: AGE (GROUPED AGES)(a), BY SEX, AUSTRALIA, CENSUSES, 1966 AND 1971**

Age last birthday (years)	Census, 30 June 1966			Census, 30 June 1971			Increase 1966-1971
	Males	Females	Persons	Males	Females	Persons	
0-4 . . .	589,956	561,098	1,151,054	626,002	597,440	1,223,442	72,388
5-9 . . .	599,117	570,833	1,169,950	625,955	594,300	1,220,255	50,305
10-14 . . .	559,137	533,071	1,092,208	628,600	597,755	1,226,355	134,147
15-19 . . .	539,052	513,487	1,052,539	567,960	542,236	1,110,196	57,657
20-24 . . .	438,623	418,936	857,559	558,166	538,779	1,096,945	239,386
25-29 . . .	385,961	363,318	749,279	480,748	452,779	933,527	184,248
30-34 . . .	357,216	333,285	690,501	412,476	388,657	801,133	110,632
35-39 . . .	398,828	368,452	767,280	380,948	358,888	739,836	-27,444
40-44 . . .	397,822	378,404	776,226	407,539	379,976	787,515	11,289
45-49 . . .	344,171	335,581	679,752	399,611	381,913	781,524	101,772
50-54 . . .	324,659	318,574	643,233	332,641	330,295	662,936	19,703
55-59 . . .	276,763	267,508	544,271	301,464	303,971	605,435	61,164
60-64 . . .	216,203	220,377	436,580	243,740	257,804	501,544	64,964
65-69 . . .	162,119	195,578	357,697	183,270	203,493	386,763	29,066
70-74 . . .	115,582	161,212	276,794	123,915	168,735	292,650	15,856
75-79 . . .	79,813	116,902	196,715	76,080	123,687	199,767	3,052
80-84 . . .	38,654	64,352	103,006	42,926	76,940	119,866	16,860
85 and over . . .	17,912	36,942	54,854	20,670	45,279	65,949	11,095
<b>Total</b> . . .	<b>5,841,588</b>	<b>5,757,910</b>	<b>11,599,498</b>	<b>6,412,711</b>	<b>6,342,927</b>	<b>12,755,638</b>	<b>1,156,140</b>

(a) Recorded ages adjusted by the distribution of ages 'not stated'.

Minus sign (-) denotes decrease.

**POPULATION: MARITAL STATUS, BY SEX, AUSTRALIA, CENSUSES, 1966 AND 1971**

Marital status	Census, 30 June 1966			Census, 30 June 1971			Increase 1966-1971
	Males	Females	Persons	Males	Females	Persons	
Never married—							
Under 15 years of age . . .	1,747,696	1,664,529	3,412,225	1,880,557	1,789,495	3,670,052	257,827
15 years of age and over . . .	1,252,635	902,854	2,155,489	1,327,684	943,824	2,271,508	116,019
<b>Total never married . . .</b>	<b>3,000,331</b>	<b>2,567,383</b>	<b>5,567,714</b>	<b>3,208,241</b>	<b>2,733,319</b>	<b>5,941,560</b>	<b>373,846</b>
Married . . .	2,600,044	2,587,196	5,187,240	2,926,865	2,924,004	5,850,869	663,629
Married but permanently separated(a) . . .	75,438	87,536	162,974	86,337	97,052	183,389	20,415
Divorced . . .	42,908	51,174	94,082	61,749	71,421	133,170	39,088
Widowed . . .	122,867	464,621	587,488	129,519	517,131	646,650	59,162
<b>Grand total . . .</b>	<b>5,841,588</b>	<b>5,757,910</b>	<b>11,599,498</b>	<b>6,412,711</b>	<b>6,342,927</b>	<b>12,755,638</b>	<b>1,156,140</b>

(a) Legally or otherwise.

**POPULATION: COUNTRY OF BIRTH, BY SEX, AUSTRALIA, CENSUSES, 1966 AND 1971**

Country of birth	Census, 30 June 1966			Census, 30 June 1971			Increase 1966-1971
	Males	Females	Persons	Males	Females	Persons	
<b>Australia . . .</b>	<b>4,688,441</b>	<b>4,780,137</b>	<b>9,468,578</b>	<b>5,037,098</b>	<b>5,139,222</b>	<b>10,176,320</b>	<b>707,742</b>
<b>New Zealand . . .</b>	<b>26,174</b>	<b>26,311</b>	<b>52,485</b>	<b>41,350</b>	<b>39,116</b>	<b>80,466</b>	<b>27,981</b>
<b>Europe—</b>							
United Kingdom and Republic of Ireland(a)	474,427	434,237	908,664	562,869	525,341	1,088,210	179,546
Germany . . .	55,799	52,910	108,709	56,196	54,615	110,811	2,102
Greece . . .	73,936	66,153	140,089	83,483	76,717	160,200	20,111
Italy . . .	150,138	117,187	267,325	159,492	129,984	289,476	22,151
Malta . . .	31,028	24,076	55,104	29,546	24,135	53,681	-1,423
Netherlands . . .	55,189	44,360	99,549	54,846	44,449	99,295	-254
Poland . . .	36,496	25,145	61,641	34,753	24,947	59,700	-1,941
Other . . .	147,921	104,509	252,430	189,836	145,269	335,105	82,675
<b>Total Europe . . .</b>	<b>1,024,934</b>	<b>868,577</b>	<b>1,893,511</b>	<b>1,171,021</b>	<b>1,025,457</b>	<b>2,196,478</b>	<b>302,967</b>
<b>Other countries . . .</b>	<b>102,039</b>	<b>82,885</b>	<b>184,924</b>	<b>163,242</b>	<b>139,132</b>	<b>302,374</b>	<b>117,450</b>
<b>Total born outside Australia . . .</b>	<b>1,153,147</b>	<b>977,773</b>	<b>2,130,920</b>	<b>1,375,613</b>	<b>1,203,705</b>	<b>2,579,318</b>	<b>448,398</b>
<b>Grand total . . .</b>	<b>5,841,588</b>	<b>5,757,910</b>	<b>11,599,498</b>	<b>6,412,711</b>	<b>6,342,927</b>	<b>12,755,638</b>	<b>1,156,140</b>

(a) Includes Ireland (undefined).

Minus sign (-) denotes decrease.

POPULATION: OVERSEAS-BORN, BY PERIOD OF RESIDENCE IN AUSTRALIA, AND SEX  
CENSUSES, 1966 AND 1971

Period of residence (years)	Census, 30 June 1966			Census, 30 June 1971			Increase 1966-1971
	Males	Females	Persons	Males	Females	Persons	
Under 1 . . . . .	88,608	73,252	161,860	99,894	85,483	185,377	23,517
1 and under . . . . .	65,980	58,361	124,341	87,636	77,963	165,599	41,258
2 " " 3 . . . . .	58,366	51,963	110,329	74,971	66,648	141,619	31,290
3 " " 4 . . . . .	46,104	41,934	88,038	54,663	48,706	103,369	15,331
4 " " 5 . . . . .	35,623	37,279	72,902	52,630	47,311	99,941	27,039
5 years and over . . . . .	833,170	693,902	1,527,072	919,986	794,788	1,714,774	187,702
Not stated . . . . .	25,296	21,082	46,378	85,833	82,806	168,639	122,261
<b>Total . . . . .</b>	<b>1,153,147</b>	<b>977,773</b>	<b>2,130,920</b>	<b>1,375,613</b>	<b>1,203,705</b>	<b>2,579,318</b>	<b>448,398</b>

POPULATION: NATIONALITY (i.e. ALLEGIANCE), BY SEX  
AUSTRALIA, CENSUSES, 1966 AND 1971

Nationality	Census, 30 June 1966			Census, 30 June 1971			Increase 1966-1971
	Males	Females	Persons	Males	Females	Persons	
<b>British(a)—</b>							
Born in Australia . . . . .	4,688,441	4,780,137	9,468,578	5,037,098	5,139,222	10,176,320	707,742
Born outside Australia . . . . .	871,263	748,582	1,619,845	987,007	869,959	1,856,966	237,121
<b>Total British . . . . .</b>	<b>5,559,704</b>	<b>5,528,719</b>	<b>11,088,423</b>	<b>6,024,105</b>	<b>6,009,181</b>	<b>12,033,286</b>	<b>944,863</b>
<b>Foreign—</b>							
Dutch . . . . .	25,941	22,014	47,955	19,710	17,081	36,791	—11,164
German . . . . .	24,262	18,559	42,821	19,066	15,196	34,262	—8,559
Greek . . . . .	53,344	53,333	106,677	53,828	53,766	107,594	917
Irish . . . . .	6,856	4,788	11,644	9,021	7,042	16,063	4,419
Italian . . . . .	81,632	71,781	153,413	81,137	72,183	153,320	—93
Polish . . . . .	7,784	5,998	13,782	4,106	3,442	7,548	—6,234
U.S. American . . . . .	8,777	6,106	14,883	14,919	11,543	26,462	11,579
Yugoslav . . . . .	24,024	14,229	38,253	39,095	30,619	69,714	31,461
Other (incl. Stateless) . . . . .	49,264	32,383	81,647	147,724	122,874	270,598	188,951
<b>Total foreign . . . . .</b>	<b>281,884</b>	<b>229,191</b>	<b>511,075</b>	<b>388,606</b>	<b>333,746</b>	<b>722,352</b>	<b>211,277</b>
<b>Grand total . . . . .</b>	<b>5,841,588</b>	<b>5,757,910</b>	<b>11,599,498</b>	<b>6,412,711</b>	<b>6,342,927</b>	<b>12,755,638</b>	<b>1,156,140</b>

(a) All persons of individual citizenship status who, by virtue of the *Citizenship Act* 1948-1969, are deemed to be British subjects. Includes naturalised British. For the purposes of this table Irish nationality is included with British.

Minus sign (—) denotes decrease.

POPULATION: RELIGIOUS DENOMINATION, BY SEX, AUSTRALIA  
CENSUSES, 1966 AND 1971

Religious denomination	Census, 30 June 1966			Census, 30 June 1971			Increase 1966-1971
	Males	Females	Persons	Males	Females	Persons	
<b>Christian—</b>							
Baptist . . . . .	78,443	87,779	166,222	82,479	93,490	175,969	9,747
Brethren . . . . .	7,491	8,180	15,671	10,900	12,063	22,963	7,292
Catholic, Roman and Catholic undefined . . . . .	1,532,930	1,509,577	3,042,507	1,718,674	1,723,960	3,442,634	400,127
Churches of Christ . . . . .	48,566	54,694	103,260	44,714	52,709	97,423	—5,837
Church of England . . . . .	1,933,567	1,951,451	3,885,018	1,941,897	2,011,307	3,953,204	68,186
Congregational . . . . .	35,933	40,689	76,622	31,289	36,870	68,159	—8,463
Greek and other Orthodox . . . . .	135,623	119,877	255,500	177,324	161,308	338,632	83,132
Jehovah's Witness . . . . .	n.a.	n.a.	n.a.	16,031	19,721	35,752	n.a.
Lutheran . . . . .	91,279	88,554	179,833	98,316	98,531	196,847	17,014
Methodist . . . . .	549,751	577,209	1,126,960	527,724	571,295	1,099,019	—27,941
Presbyterian . . . . .	513,019	532,545	1,045,564	497,793	530,788	1,028,581	—16,983
Salvation Army . . . . .	27,188	29,497	56,685	30,823	35,008	65,831	9,146
Seventh-day Adventist . . . . .	17,175	20,877	38,052	18,680	22,937	41,617	3,565
Protestant (undefined) . . . . .	53,028	52,346	105,374	118,449	124,753	243,202	137,828
Other (incl. Christian undefined) . . . . .	64,663	68,481	133,144	89,254	91,292	180,546	n.a.
<b>Total Christian . . . . .</b>	<b>5,088,656</b>	<b>5,141,756</b>	<b>10,230,412</b>	<b>5,404,347</b>	<b>5,586,032</b>	<b>10,990,379</b>	<b>759,967</b>
<b>Non-Christian—</b>							
Hebrew . . . . .	31,303	31,972	63,275	30,619	31,589	62,208	—1,067
Muslim . . . . .	n.a.	n.a.	n.a.	13,600	8,711	22,311	n.a.
Other . . . . .	8,804	4,843	13,647	8,434	5,970	14,404	n.a.
<b>Total non-Christian . . . . .</b>	<b>40,107</b>	<b>36,815</b>	<b>76,922</b>	<b>52,653</b>	<b>46,270</b>	<b>98,923</b>	<b>22,001</b>
Indefinite . . . . .	19,905	16,645	36,550	16,755	12,658	29,413	—7,137
No religion . . . . .	61,623	34,517	96,140	517,360	338,316	855,676	759,536
No reply . . . . .	631,297	528,177	1,159,474	421,596	359,651	781,247	—378,227
<b>Grand total . . . . .</b>	<b>5,841,588</b>	<b>5,757,910</b>	<b>11,599,498</b>	<b>6,412,711</b>	<b>6,342,927</b>	<b>12,755,638</b>	<b>1,156,140</b>

Minus sign (—) denotes decrease.

## The Aboriginal population of Australia

In Year Book No. 17, pages 951–61, a brief account was given of the Australian Aboriginal population, its origin, its numbers as estimated from time to time and the steps taken for its protection. On pages 914–16 of Year Book No. 22 particulars were shown for each of the States and Territories of Australia at successive periods, while a special article dealing with the estimated number and distribution of the native population at the date of first settlement of the white race in the continent appeared on pages 687–96 of Year Book No. 23.

Aborigines have been enumerated in all censuses of the Commonwealth, but the degree of coverage and information obtained has varied substantially since 1911. Since the census taken in 1933 the adequacy of the particulars obtained has improved progressively as a result of an increasing number of Aborigines coming into contact with more populated areas.

At the 1966 Census extensive arrangements were made to obtain as full a coverage of Aborigines as possible and to enumerate fully those Aborigines 'out of contact'. Throughout Australia the assistance of Aboriginal welfare bodies, mission superintendents, station owners, patrol officers, and police was sought in an effort to include all Aborigines and to obtain complete information about them, e.g. in the Northern Territory information was obtained from missions and settlements concerning Aborigines normally resident at such locations but who were absent at the time of the census, and of Aborigines resident at such locations but who normally resided elsewhere. The two sets of information were then reconciled to produce what is considered to be a fairly complete and accurate coverage of Aborigines in the Territory.

### Selected characteristics

For details of certain selected characteristics derived from the 1966 Census see Year Book No. 56, pages 138–42. Details of all characteristics enumerated, together with details for States and Territories, and comparisons between the Aboriginal population and the total population, may be found in the publication *The Aboriginal Population of Australia* (Reference No. 2.23).

At censuses prior to the 1966 Census, the instructions relating to race were insufficient to enable respondents to classify themselves according to degree of race mixture. For example, from 1933 to 1961 persons were asked to state:

'For persons of European Race, wherever born, write "European". For non-Europeans state the race to which they belong, for example, "Aboriginal", "Chinese", "Negro", "Afghan", etc. If the person is half-caste with one parent of European race, write also "H.C.", for example, "H.C. Aboriginal", "H.C. Chinese", etc.'

At the 1966 Census the instructions were redesigned as follows in an endeavour to obtain precise data on race mixture and also to avoid the opprobrium attaching to the term 'half-caste':

'State each person's race. For persons of European race wherever born, write "European". Otherwise state whether Aboriginal, Chinese, Indian, Japanese, etc., as the case may be. If of more than one race give particulars, for example,  $\frac{1}{2}$  European— $\frac{1}{2}$  Aboriginal,  $\frac{2}{3}$  Aboriginal— $\frac{1}{3}$  Chinese,  $\frac{1}{2}$  European— $\frac{1}{2}$  Chinese.'

Investigations made by matching the replies of individuals at the 1961 and 1966 Censuses and by comparing overall census results with data available from the State instrumentalities responsible for Aboriginal welfare suggest that considerable doubt attaches to the validity of the replies given to the question on race at the 1966 and previous censuses.

It was concluded:

- (a) that reporting by Aborigines in the 1966 Census was insufficiently precise to differentiate persons who are 50 per cent Aboriginal from those who are more than 50 per cent Aboriginal;
- (b) that similar dissections obtained at censuses prior to the 1966 Census were similarly imprecise; and
- (c) that even a total of all persons who are 50 per cent or more Aboriginal may be suspect, primarily because of the inclusion of persons who are less than 50 per cent Aboriginal and described themselves simply as 'Aboriginal', but also because of persons who are 50 per cent Aboriginal stating their race as 'European'.

Nevertheless, the statistics herein, which relate to persons who have described themselves as 50 per cent or more Aboriginal or simply as 'Aboriginal', are presented subject to these limitations.

The following table shows particulars of the Aboriginal population of Australia at the Censuses of 30 June, 1954, 1961, and 1966. Because of some doubt about the accuracy of separate figures for full-blood and half-blood Aborigines as shown in previous issues of the Year Book, their separate



publication has been discontinued. Torres Strait Islanders are not included in this table, but are included in the census figures shown elsewhere in this chapter. At the 1966 Census they numbered 5,403 persons.

**ABORIGINAL POPULATION(a): STATES AND TERRITORIES  
CENSUSES, 1954, 1961 AND 1966**

State or Territory	Census, 1954(a)			Census, 1961(a)			Census, 1966(b)		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
New South Wales	6,278	5,935	12,213	7,494	7,222	14,716	7,343	6,876	14,219
Victoria	691	704	1,395	899	897	1,796	856	934	1,790
Queensland	8,368	7,781	16,149	10,146	9,550	19,696	9,644	9,359	19,003
South Australia	1,675	1,537	3,212	2,607	2,277	4,884	2,914	2,591	5,505
Western Australia	6,564	6,135	12,699	8,351	7,925	16,276	9,505	8,934	18,439
Northern Territory	5,990	5,798	11,788	9,013	8,747	17,760	10,651	10,468	21,119
Australia(c)	29,716	28,006	57,722	38,612	36,697	75,309	40,984	39,223	80,207

(a) Prior to the 1966 Census, Aborigines 'out of contact' were not enumerated and estimates of these were made by authorities responsible for native welfare. It is estimated that at the 1954 Census 12,956 Aborigines (of which 2,311 were estimated to be in Queensland, 1,760 in South Australia, 3,516 in Western Australia and 5,369 in the Northern Territory) were not contacted by census collectors and were not included in the Census. Increasing numbers, however, were coming into contact and at the 1961 Census it is estimated that 2,000 Aborigines in Western Australia and 1,944 in the Northern Territory were not contacted by census collectors. At the 1966 Census, efforts were made to obtain complete coverage. (b) The figures relate to those persons who described themselves in the 1966 Census as being 50 per cent or more Aboriginal or simply as 'Aboriginal'. For reasons stated above, it has not been possible to differentiate between persons who are 50 per cent Aboriginal from those who are more than 50 per cent Aboriginal. (c) Includes Tasmania and the Australian Capital Territory.

### 1971 Census of Population and Housing

In view of the limitations on the statistics described above, an attempt was made for the 1971 Census to design a question which would obtain more meaningful data on the Aboriginal population. The advice of expert bodies approached was that such data would be obtained by asking each respondent to indicate the race to which he considered himself to belong.

In addition the repeal of Section 127 of the Constitution in 1967 removed the need for the question on racial origin to identify 'Aboriginal natives'. ('Aboriginal natives', the term used in the Constitution, was interpreted as those persons possessing more than 50 per cent Aboriginal blood).

The question at the 1971 Census read:

What is this person's racial origin?

(If of mixed origin indicate the one to which he considers himself to belong)

(Tick one box only or give one origin only)

- ☐ European origin
- ☐ Aboriginal origin
- ☐ Torres Strait Islander origin
- ☐ Other origin (give one only).....

The following table shows particulars of the Aboriginal population of Australia at the Census of 30 June 1971. The statistics for Aborigines are not on a comparable basis with those from previous Censuses (see above).

**ABORIGINAL POPULATION: SECTION OF STATE, BY SEX, STATES AND TERRITORIES, CENSUS  
30 JUNE 1971**

State or Territory	Major Urban(a)			Other Urban(a)			Rural(a)			Migratory(a)			Total		
	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons
New South Wales	2,967	2,988	5,955	4,636	4,644	9,280	4,066	3,786	7,852	13	1	14	11,682	11,419	23,101
Victoria	1,487	1,412	2,899	883	952	1,835	479	437	916	6	..	6	2,855	2,801	5,656
Queensland	1,251	1,354	2,605	3,475	3,706	7,181	7,576	7,045	14,621	4	3	7	12,306	12,108	24,414
South Australia	834	887	1,721	747	765	1,512	2,116	1,791	3,907	..	..	..	3,697	3,443	7,140
Western Australia	1,094	1,137	2,231	3,227	3,287	6,514	6,921	6,223	13,144	8	6	14	11,250	10,653	21,903
Tasmania	96	77	173	131	125	256	78	66	144	..	..	..	305	268	573
Northern Territory	..	..	..	2,029	1,975	4,004	9,656	9,592	19,248	1	..	1	11,686	11,567	23,253
Australian Capital Territory	46	36	82	..	..	..	90	76	166	..	..	..	136	112	248
Australia	7,775	7,891	15,666	15,128	15,454	30,582	30,982	29,016	59,998	32	10	42	53,917	52,371	106,288

(a) For definition of urban, rural, etc., see explanation given on page 134.

### Projections of the population

Projections are sometimes distinguished from forecasts on the basis that the former are extrapolations of existing populations assuming the continuance of past trends of births, deaths, and migration. Forecasts may also take into account expectations of trends in other factors such as employment opportunities, government policy or technological advance.

The method chosen for these projections is similar to the method used for the current estimates of the population except that hypothetical figures of births, deaths and net migration are used instead of recorded births, deaths and net migration.

The assumptions employed in the latest set of projections, and summaries of the results, are given below. They cover the years 1972 to 2000, taking 1970 as the base year.

*Fertility.* For the projections of base year populations, the age-specific birth rates and the masculinity of births recorded in *each State and Territory* in 1970 were used for all future years. Additional female population resulting from future migration was assumed to experience the age-specific birth rates and masculinity of births recorded in 1970 for *Australia as a whole*. The projected births for Australia are the sum of the projected births for each State and Territory.

*Mortality.* It was assumed that the average age-specific mortality rates recorded in *each State, Territory and Australia* in the three years 1965 to 1967, related to the 1966 Census population, would remain unchanged. The projected deaths for Australia are the sum of the projected deaths for each State and Territory. Deaths of persons in the migration component are projected on the basis of the *Australian* 1965-67 mortality experience.

*Migration.* The age-sex composition of all future net interstate and/or overseas migration was assumed to be the average age-sex distribution of the net overseas migration (excess of total arrivals over total departures) recorded for Australia as a whole for the five years ended 30 June 1970.

It has been assumed that the future migration component, for a State, Territory or Australia, will be subject for the whole of the projection period, to the same age-specific fertility and mortality rates as experienced by the Australian population as a whole in 1970 (fertility) and 1965-67 (mortality), regardless of the State or Territory to which the people move, or the State, Territory or country whence they came.

Projections of the population resulting from net migration at a rate of 100,000 persons per annum are shown in the last column of the next table. The table also provides projected populations exclusive of future migration. The use of a single set of assumptions regarding fertility, mortality and age-sex composition of the migration component enables pro-rata calculations to be made of the migration components of projected State and Territory populations, as well as for Australia as a whole, to any chosen constant level.

**PROJECTION OF THE POPULATION EXCLUDING OVERSEAS OR INTERSTATE MIGRATION AFTER 30 JUNE 1970: STATES, TERRITORIES AND AUSTRALIA; AND EXTRA POPULATION RESULTING FROM NET MIGRATION AT 100,000 PERSONS PER ANNUM, 1972 TO 2000**

('000 persons)

30 June—	Population exclusive of overseas or interstate migration after 30 June 1970									Extra population resulting from net migration at 100,000 persons per annum (a)
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
1970(b)	4,513.0	3,440.0	1,789.8	1,157.2	988.9	387.3	78.1	131.4	12,485.6	..
1971(c)	4,589.6	3,496.2	1,823.4	1,172.8	1,027.4	389.9	85.5	143.8	12,728.5	101.3
1972 .	4,605.6	3,526.9	1,834.0	1,183.6	1,018.1	397.3	82.8	136.4	12,784.7	205.4
1973 .	4,653.4	3,572.1	1,857.3	1,197.5	1,033.3	402.5	84.9	139.3	12,940.3	312.2
1974 .	4,702.2	3,618.3	1,881.2	1,212.0	1,048.9	408.0	86.9	142.2	13,099.8	421.8
1975 .	4,751.8	3,665.4	1,905.8	1,226.8	1,064.9	413.7	89.1	145.1	13,262.6	543.1
1980 .	5,009.9	3,912.7	2,037.5	1,306.3	1,149.9	445.0	100.4	159.2	14,120.8	1,134.7
1985 .	5,278.4	4,175.8	2,179.5	1,390.0	1,238.9	479.0	113.4	173.4	15,028.5	1,797.7
1990 .	5,544.0	4,446.7	2,325.3	1,471.2	1,327.8	513.1	128.5	188.1	15,944.6	2,522.8
1995 .	5,803.5	4,727.5	2,473.6	1,548.7	1,418.0	546.8	146.4	202.9	16,867.3	3,313.0
2000 .	6,070.8	5,030.9	2,631.7	1,629.2	1,514.8	582.7	167.1	218.0	17,845.1	4,170.2

(a) The projected net gain from migration for any State or Territory resulting from sustained net migration at any other level may be calculated *pro rata* from the figures in this column. (b) Estimate based on the Census of 30 June 1966 and subsequent births, deaths and migration, adjusted in accordance with preliminary results of the 1971 Census. (c) 1971 Census, preliminary results. These figures include migration during the twelve months ended June 1971.

To indicate the effects on total population if recent migration levels were to continue unchanged, projections of population resulting from migration have been made for the States, Territories and Australia, using as annual intake levels the estimated average net interstate and overseas migration recorded for the five years ended 30 June 1970. These average annual levels are shown in the following table, together with selected projections of the populations of the States, Territories and Australia, inclusive of future migration at these levels.

**PROJECTION OF THE POPULATION INCLUDING ANNUAL OVERSEAS AND INTERSTATE NET MIGRATION AFTER 30 JUNE 1970 AT AVERAGE 1966-70 LEVELS: STATES, TERRITORIES AND AUSTRALIA 1972 TO 2000**

('000 persons)

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual net migration(a)	26.6	16.4	9.4	6.2	20.9	-0.8	3.4	6.3	88.3
1970(b)	4,513.0	3,440.0	1,789.8	1,157.2	988.9	387.3	78.1	131.4	12,485.6
1971(c)	4,589.6	3,496.2	1,823.4	1,172.8	1,027.4	389.9	85.5	143.8	12,728.5
1972 .	4,660.1	3,560.5	1,853.3	1,196.3	1,060.9	395.6	89.9	149.3	12,965.9
1973 .	4,736.3	3,623.1	1,886.6	1,216.9	1,098.4	400.1	95.6	158.9	13,215.9
1974 .	4,814.2	3,687.3	1,920.9	1,238.1	1,136.9	404.7	101.4	168.6	13,472.0
1975 .	4,893.6	3,752.7	1,956.0	1,259.9	1,176.3	409.5	107.4	178.5	13,734.0
1980 .	5,311.2	4,098.3	2,144.2	1,376.5	1,386.5	436.0	139.4	230.2	15,122.2
1985 .	5,755.8	4,469.7	2,348.5	1,501.3	1,613.7	464.9	175.2	285.9	16,615.0
1990 .	6,213.8	4,859.2	2,562.4	1,627.3	1,853.8	493.2	215.3	345.8	18,171.0
1995 .	6,683.2	5,269.3	2,785.0	1,753.8	2,108.7	520.7	260.3	410.1	19,791.1
2000 .	7,178.1	5,712.7	3,023.7	1,887.4	2,384.4	549.8	310.4	478.8	21,525.3

(a) Net annual migration gain allocated to each State or Territory at the average annual 1966-70 levels. (b) Estimate based on the Census of June 1966 and subsequent births, deaths and migration, adjusted in accordance with preliminary results of the 1971 Census. (c) 1971 Census, preliminary results.



### Population of External Territories

Ordinances of the individual External Territories under the control of Australia provide for a census of the population to be taken on the day prescribed for the taking of a census in the Commonwealth of Australia. The following table shows the population of the Territories of Christmas Island, Cocos (Keeling) Islands, Norfolk Island, Papua and the Trust Territory of New Guinea at the Census of 30 June 1971 and as estimated at 30 June 1972.

POPULATION: EXTERNAL TERRITORIES, 30 JUNE 1971 AND 1972

Territory	Census 30 June 1971(a)			Estimate 30 June 1972
	Males	Females	Persons	Persons
Christmas Island . .	1,732	959	2,691	2,741
Cocos (Keeling) Islands .	312	306	618	637
Norfolk Island . . .	824	859	1,683	1,694
Papua—				
Indigenous population .	n.a.	n.a.	n.a.	686,618
Non-indigenous population	n.a.	n.a.	n.a.	n.a.
<i>Total, Papua . . .</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>(b)n.a.</i>
Trust Territory of New Guinea—				
Indigenous population .	n.a.	n.a.	n.a.	1,845,264
Non-indigenous population	n.a.	n.a.	n.a.	n.a.
<i>Total, New Guinea .</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>(b)n.a.</i>

(a) Results from the 1971 Census of Papua New Guinea are not yet available. Estimates of population for 30 June 1971 are as follows: Indigenous; Papua, 668,864; New Guinea, 1,796,979; Total Non-indigenous, 53,132; Total population, Papua New Guinea, 2,518,975. The estimates for both 1971 and 1972 are subject to revision when 1971 Census results become available.  
(b) The total population for Papua New Guinea was 2,581,032 at 30 June 1972.

Further particulars concerning the indigenous populations of the Territories are given in the chapter The Territories of Australia.

### International statistics of population

In the following tables the population, density, rate of growth, natural increase and masculinity are shown in respect of all countries which had an estimated population of at least ten million persons in 1971, excepting for the group 'Oceania', which is treated in more detail. The source of these figures for all countries except Australia is the 1971 *Demographic Yearbook*, which is prepared and published by the Statistical Office of the United Nations. The tables include figures varying in reliability and accuracy, there being considerable variation in the quality of demographic statistics between countries, but this information has been shown to provide a guide as to the magnitude and trend of population movements in overseas countries.

Where the information available to the Statistical Office of the United Nations relates to only part of the population of a country, the population characteristic (e.g. rate of growth), or vital statistics rate (e.g. marriages), has been omitted from the tables, and this is indicated by a footnote.

For fuller particulars of the differences in the quality of the statistics and their reliability and for other qualifications, reference should be made to the detailed explanations contained in the *Demographic Yearbook* of the Statistical Office of the United Nations (see particularly Technical Notes on Statistical Tables and footnotes to the tables).

### Population, rate of growth and density: world, continents and regions

In preparing the population figures shown below the Population Branch of the United Nations includes revisions made to the estimates from time to time as new data become available, for example, from a census. Adjustments for under-enumeration have also been made. Reference should be made to the description contained in the United Nations *Demographic Yearbook*, 1971 (pages 15-16), regarding the scheme of regionalisation.

### POPULATION, DENSITY AND RATE OF INCREASE FOR THE WORLD AND CONTINENTS—SELECTED YEARS

(Source: United Nations *Demographic Yearbook*, 1971)

Continent and region	Population						Annual rate of increase 1963-71 (per cent)	Average annual increase 1963-71 (millions)	Density (persons per square mile) 1971
	Estimates of mid-year population (millions)								
	1930	1940	1950	1960	1963	1971			
World total	2,070	2,295	2,486	2,982	3,162	3,706	2.0	68.0	70.0
Africa	164	191	217	270	289	354	2.6	8.1	31.0
Western Africa	48	58	64	80	85	104	2.5	2.4	44.0
Eastern Africa	46	54	62	77	82	100	2.5	2.3	41.0
Northern Africa	39	44	51	65	71	89	3.0	2.3	26.0
Middle Africa	21	23	25	29	31	37	2.1	0.8	16.0
Southern Africa	10	12	14	18	19	23	2.3	0.5	23.0
America	242	274	328	412	441	522	2.1	10.1	31.0
Northern America	134	144	166	199	208	230	1.3	2.8	28.0
Latin America	108	130	162	213	232	291	2.9	7.4	36.0
Tropical South America	55	67	84	112	122	155	3.0	4.1	28.0
Middle America	22	27	35	48	53	70	3.4	2.1	73.0
Temperate South America	19	22	27	33	35	40	1.8	0.6	26.0
Caribbean	12	14	17	21	22	26	2.3	0.5	287.0
Asia(a)	1,120	1,244	1,355	1,645	1,754	2,104	2.3	43.8	197.0
East Asia	591	634	657	780	822	946	1.8	15.5	207.0
Mainland Region	501	533	536	640	675	779	1.8	13.0	181.0
Japan	64	71	83	93	96	105	1.1	1.1	733.0
Other East Asia	26	30	38	47	51	63	2.6	1.5	627.0
South Asia	529	610	698	865	931	1,158	2.8	28.4	189.0
Middle South Asia	371	422	481	588	632	783	2.7	18.9	300.0
South East Asia	127	150	173	219	236	295	2.8	7.4	171.0
South West Asia	31	38	44	58	63	79	2.9	2.0	47.0
Europe(a)	355	380	392	425	437	466	0.8	3.8	243.0
Western Europe	108	113	122	135	140	150	0.8	1.3	388.0
Southern Europe	93	103	109	118	120	130	0.9	1.3	256.0
Eastern Europe	89	96	89	97	99	105	0.8	0.8	275.0
Northern Europe	65	68	72	76	78	81	0.6	0.4	129.0
Oceania	10.0	11.1	12.6	15.8	16.8	19.8	2.1	0.4	5.0
Australia and New Zealand	8.0	8.7	10.1	12.7	13.5	15.7	1.9	0.3	5.0
Melanesia	1.6	1.8	1.8	2.2	2.3	2.8	2.4	0.6	13.0
Polynesia and Micronesia	0.4	0.6	0.7	0.9	1.0	1.3	3.2	0.4	108.0
Union of Soviet Socialist Republics	179	195	180	214	225	245	1.1	2.5	28.0

(a) Excludes U.S.S.R. shown below.

### Population, density, rate of growth, natural increase, and masculinity of selected countries

Certain details of the population of the more populous countries within continental groups are shown in the following table. As explained above, reference should be made to the detailed comments contained in the United Nations *Demographic Yearbook*, 1971, regarding geographical units used, boundaries of areas, reliability of estimates, etc.

**POPULATION, DENSITY, RATE OF INCREASE, NATURAL INCREASE AND  
MASCULINITY—SELECTED COUNTRIES**

*(Source: United Nations Demographic Yearbook, 1971)*

Country	Population mid-year 1971 (thousands)	Density (persons per square mile)	Annual rate of increase 1963-71 (per cent)	Natural increase		Masculinity at latest census	
				Year	Rate (per thousand popula- tion)	Year	Rate (number of males per 100 females)
Africa—							
Nigeria . . . . .	56,510	158	2.5	1965-70	24.7	1963	102.0
United Arab Republic, Egypt . . . . .	34,130	88	2.5	1970	19.9	1966	101.8
Ethiopia . . . . .	25,248	54	1.8	1965-70	20.6	..	(a)
South Africa . . . . .	22,092	47	3.1	1965-70	23.7	1970	97.0
Congo, Democratic Republic of (b) . . . . .	17,423	18	2.2	1965-70	21.6	1961	85.3
Sudan . . . . .	16,087	16	2.8	1965-70	30.5	1956	102.2
Morocco . . . . .	15,234	88	..	1965-70	33.0	1960	99.9
Algeria . . . . .	14,769	16	3.5	1965-70	32.2	1966	96.9
Tanzania—							
Tanganyika . . . . .	13,244	36	2.6	1957	21-22	1967	95.0
Zanzibar . . . . .	386	407	2.0	1970	26.0	1967	102.4
Kenya . . . . .	11,694	52	3.1	1965-70	30.3	1969	100.4
North America—							
United States of America . . . . .	207,006	57	1.1	1971	8.0	1970	94.8
Mexico . . . . .	50,830	67	3.2	1970	33.5	1970	99.6
Canada . . . . .	21,786	5	1.8	1971	..	1966	100.9
South America—							
Brazil . . . . .	95,408	28	2.8	1965-70	28.3	1970	98.9
Argentina . . . . .	23,552	21	1.5	1968	12.2	1970	98.6
Colombia . . . . .	21,772	49	3.2	1965-70	34.0	1964	97.1
Peru . . . . .	14,015	28	3.1	1965-70	30.7	1961	98.9
Venezuela (b) . . . . .	10,399	28	3.6	1965-70	33.1	1961	103.3
Asia—							
China, People's Republic of . . . . .	787,176	212	1.8	1965-70	17.8	1953	107.6
India . . . . .	550,374	435	2.2	1965-70	26.1	1971	107.2
Indonesia . . . . .	124,894	218	2.8	1965-70	28.9	1971	98.2
Pakistan . . . . .	116,598	319	2.1	1965-70	32.5	1961	111.1
Japan . . . . .	104,661	733	1.1	1971	12.6	1970	96.5
Philippines . . . . .	37,959	329	3.0	1965-70	32.7	1970	99.0
Thailand . . . . .	35,335	179	2.7	1965-70	32.4	1960	100.4
Turkey in Asia . . . . .	33,010	114	2.5	1967	25.0	..	(a)
Korea, Republic of . . . . .	31,917	839	2.2	1965-70	24.6	1970	100.6
Iran . . . . .	29,783	47	3.0	1965-70	28.8	1966	107.3
Burma (b) . . . . .	27,584	106	2.2	1965-70	22.9	1941	104.0
Vietnam (North)(b) . . . . .	21,595	352	2.4	1965-70	21.4	1960	93.4
Vietnam, Republic of(b) . . . . .	18,332	272	2.6	1965-70	21.4	..	(a)
Afghanistan . . . . .	17,480	70	2.3	1965-70	24.0	..	(a)
Taiwan(b) . . . . .	14,035	1,010	2.6	1970	23.0	1966	109.4
Korea (North) . . . . .	14,281	306	2.8	1965-70	27.6	..	(a)
Ceylon . . . . .	12,669	500	2.2	1970	21.9	1963	108.2
Nepal . . . . .	11,290	207	1.8	1965-70	21.7	1961	97.0
Europe—							
Germany—							
Federal Republic of . . . . .	59,175	619	0.8	1971	0.8	1961	89.4
Eastern . . . . .	15,954	383	-0.1	1970	-0.2	1964	84.1
West Berlin . . . . .	2,105	11,336	-0.4	1970	-9.5	1961	73.2
East Berlin . . . . .	1,086	6,980	0.3	1969	-3.1	1964	77.8
United Kingdom . . . . .	55,566	591	0.4	1971	4.6	1971	94.4
Italy . . . . .	54,078	466	0.8	1971	7.2	1961	94.0
France . . . . .	51,260	243	0.9	1971	6.4	1962	94.6
Spain . . . . .	34,134	176	1.1	1970	11.1	1970	95.4
Poland . . . . .	32,749	272	0.8	1971	..	1970	94.5
Yugoslavia . . . . .	20,550	207	1.0	1971	9.5	1961	95.1
Romania . . . . .	20,470	223	1.1	1970	11.6	1966	95.9
Czechoslovakia . . . . .	14,500	293	0.5	1970	4.4	1970	95.0
Netherlands . . . . .	13,194	837	1.2	1971	10.4	1960	99.2
Hungary . . . . .	10,364	287	0.4	1971	2.6	1970	94.0
Oceania—							
Australia . . . . .	12,728	5	1.9	1971	12.8	1971	101.2
New Zealand . . . . .	2,853	28	1.5	1970	13.3	1971	99.9
New Guinea (Trust Territory) . . . . .	1,790	18	2.1	1971	(a)	1966	108.6
Papua . . . . .	691	8	3.1	1971	(a)	1966	110.6
U.S.S.R.—							
Union of Soviet Socialist Republics . . . . .	245,066	28	1.1	1971	9.6	1970	85.5

(a) Not available or information relates to a segment of a population only.  
for mid-year 1970, annual rate of increase relates to 1963-70.

(b) Population and density are show



### Overseas arrivals and departures

This section contains summary statistics of total overseas arrivals and departures and detailed statistics of permanent movement. For information on passengers in other categories, see Chapter 12, Transport, Communication and Travel.

More detailed statistics of overseas arrivals and departures, covering country of residence, country of embarkation or disembarkation, mode of travel, month of arrival or departure, etc., are shown in the tables of Section II, Overseas Arrivals and Departures, of the annual bulletin *Demography* and for 1972 and later years, in an annual mimeographed bulletin *Overseas Arrivals and Departures*. Mimeographed bulletins are also issued monthly and quarterly.

#### Overseas arrivals and departures since 1941

Earlier issues of the Year Book contain tables showing the increase of population by net migration from 1861 to the latest date, while information for individual years from 1901 is published in the annual bulletin *Demography* (see also Statistical Summary of this Year Book). Australian statistics of overseas arrivals and departures exclude aircraft and ships' crews, persons on pleasure cruises commencing and finishing in Australia on ships not then engaged in regular voyages and persons who pass through on the same ship or flight or who change flights without leaving the airport's transit area. The following table shows arrivals and departures since 1941, and refers to total movement irrespective of length of stay.

#### OVERSEAS ARRIVALS AND DEPARTURES, BY SEX: AUSTRALIA, 1941 TO 1972

Period	Total arrivals			Total departures			Excess of arrivals over departures		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
1941-45(a)	35,422	28,503	63,925	30,097	26,019	56,116	5,325	2,484	7,809
1946-50(a)	398,507	303,413	701,920	180,779	168,057	348,836	217,728	135,356	353,084
1951-55	581,300	446,566	1,027,866	340,819	273,223	614,042	240,481	173,343	413,824
1956-60	695,445	568,652	1,264,097	481,235	377,840	859,075	214,210	190,812	405,022
1961-65	1,107,419	896,215	2,003,634	906,956	696,790	1,603,746	200,463	199,425	399,888
1966-70	2,299,254	1,592,832	3,892,086	2,007,981	1,340,297	3,348,278	291,273	252,535	543,808
1968	465,232	306,560	771,792	403,748	254,991	658,739	61,484	51,569	113,053
1969	545,559	353,299	898,858	475,840	293,972	769,812	69,719	59,327	129,046
1970	613,899	412,776	1,026,675	548,353	355,448	903,801	65,546	57,328	122,874
1971	625,066	453,732	1,078,798	581,510	412,683	994,193	43,556	41,049	84,605
1972	608,730	501,940	1,110,670	597,765	485,059	1,082,824	10,965	16,881	27,846

(a) Excludes movements of defence personnel from September 1939 to June 1947.

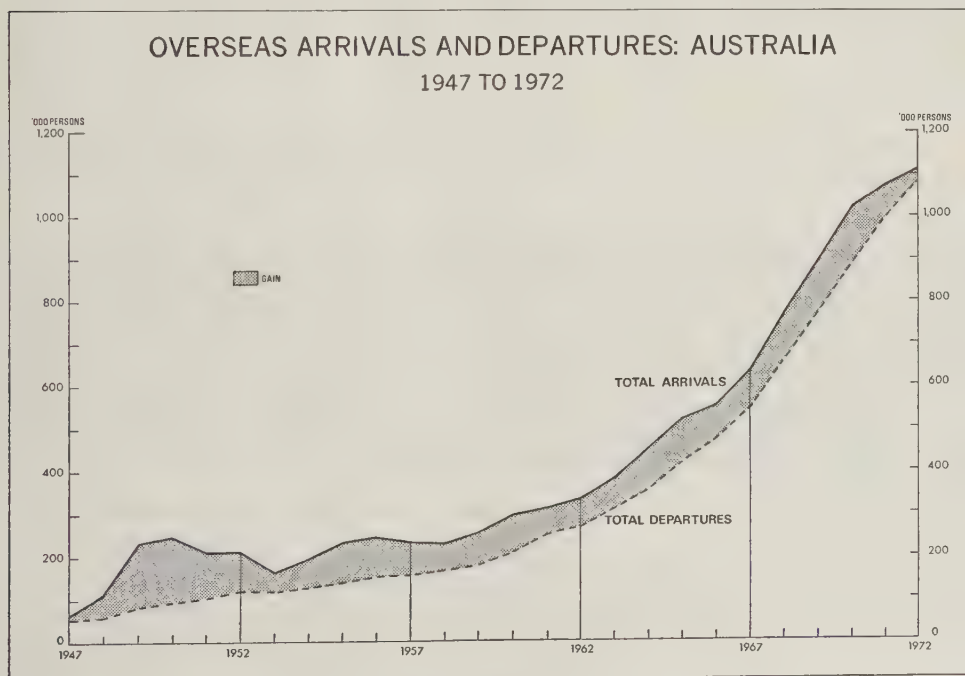


PLATE 18

**Excess of arrivals over departures**

The excess of total overseas arrivals over departures is one of the elements of population increase taken into account in preparing the estimated population for other than census dates (*see* pages 125 and 131 of this chapter). It is necessary to use statistics of total overseas arrivals and departures for this purpose, because Australian population statistics relate to the total population present in Australia at the date of the census or estimate, and not the population normally resident in Australia (which would include those temporarily overseas and exclude those temporarily visiting Australia).

**EXCESS OF ARRIVALS OVER DEPARTURES, BY SEX: AGE AND MARITAL STATUS  
AUSTRALIA, 1971 AND 1972**

<i>Age and marital status</i>	<i>1971</i>			<i>1972</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
<b>AGE</b>						
Age last birthday on arrival or departure—						
0-4 . . .	4,507	4,154	8,661	778	1,006	1,784
5-14 . . .	9,548	8,447	17,995	3,724	2,765	6,489
15-24 . . .	14,571	10,021	24,592	5,159	3,350	8,509
25-44 . . .	12,638	13,319	25,957	-1,237	4,811	3,574
45-64 . . .	1,575	4,419	5,994	960	2,597	3,557
65 and over . . .	717	689	1,406	1,581	2,352	3,933
<b>Total . . .</b>	<b>43,556</b>	<b>41,049</b>	<b>84,605</b>	<b>10,965</b>	<b>16,881</b>	<b>27,846</b>
<b>MARITAL STATUS</b>						
Never married—						
Under 15 years of age	14,055	12,601	26,656	4,502	3,771	8,273
15 years of age and over . . .	11,979	7,134	19,113	667	3,016	3,683
Married . . .	16,270	20,052	36,322	4,562	7,499	12,061
Widowed . . .	315	601	916	482	2,016	2,498
Divorced . . .	937	661	1,598	752	579	1,331
<b>Total . . .</b>	<b>43,556</b>	<b>41,049</b>	<b>84,605</b>	<b>10,965</b>	<b>16,881</b>	<b>27,846</b>

**Classification of travellers**

Since 1 July 1924 overseas travellers have been classified into two principal categories, distinguishing movements for short terms from movements for longer periods (including permanently). Before 1957 these categories were classified as *temporary* and *permanent*. Thereafter the categories were entitled *short-term* and *permanent and long-term*, but the basis of classification was not changed and the figures are directly comparable for the whole period. For short-term travel, overseas visitors and Australian residents are identified separately.

Revised questions for travellers were introduced in mid-1958, and these enabled the separation, from 1 January 1959, of permanent from other long-term movements and also the identification among the permanent departures of former settlers departing.

The principal categories of overseas movement are as follows:

*Permanent*—consists of persons arriving with the stated intention of settling permanently in Australia (settlers), and Australian residents departing with the stated intention of residing permanently abroad; the latter include *former settlers*, i.e. persons who, on departure from Australia, stated that they had come to Australia to settle, had stayed for a period of twelve months or more and were now departing permanently.

*Long-term*—consists of the arrival of overseas visitors and the departure of Australian residents with the stated intention of staying (in Australia or in a country abroad respectively) for twelve months or more; and the departure of visitors and the return of residents who have stayed (in Australia or in a country abroad respectively) for twelve months or more.

*Short-term*—consists of all other movements, including the movement of Australian troops irrespective of period of stay, and U.S. troops who visited Australia on rest and recreation leave during the period October 1967 to December 1971.

This classification is based on statements made by the traveller on arrival in, or departure from, Australia. They represent the traveller's intention at that time. Many travellers subsequently change their intentions, and this must be borne in mind in interpreting the statistics.

The numbers so classified since 1 January 1946 are as follows:

### OVERSEAS ARRIVALS AND DEPARTURES: CLASSIFICATION OF TRAVELLERS AUSTRALIA, 1946 TO 1972

#### ARRIVALS

Period	Permanent and long-term movement				Short-term movement			
	Per- manent	Long-term	Overseas visitors arriving	Total permanent and long-term arrivals	Australian residents returning	Overseas visitors arriving		
	Settlers arriving	Australian residents returning				In transit	Other	Total
1946-50	n.a.	n.a.	n.a.	457,988	108,736	n.a.	n.a.	135,196
1951-55	n.a.	n.a.	n.a.	570,090	216,949	77,825	163,002	240,827
1956-60	n.a.	n.a.	n.a.	615,767	309,611	84,206	254,513	338,719
1961-65	575,992	111,288	73,848	761,128	585,203	143,424	513,879	657,303
1966-70	804,063	180,741	122,405	1,107,209	1,298,500	207,379	1,278,998	1,486,377
1968	159,270	36,387	23,473	219,130	252,773	37,672	262,217	299,889
1969	183,416	38,308	26,867	248,591	288,990	42,485	318,792	361,277
1970	185,325	42,099	31,194	258,618	351,929	58,330	357,798	416,128
1971	155,525	47,782	30,500	233,807	412,598	64,727	367,666	432,393
1972	112,468	54,278	26,559	193,305	490,962	77,592	348,811	426,403

#### DEPARTURES

Period	Permanent and long-term movement				Short-term movement			
	Permanent		Total per- manent depart- ures	Long-term	Overseas visitors departing	Total per- manent and long-term depart- ures	Australian residents departing	Overseas visitors departing
	Former settlers departing	Other residents departing						
1946-50	n.a.	n.a.	n.a.	n.a.	n.a.	105,968	101,787	141,081
1951-55	n.a.	n.a.	n.a.	n.a.	n.a.	155,509	212,978	245,555
1956-60	n.a.	n.a.	n.a.	n.a.	n.a.	210,807	306,118	342,150
1961-65	48,491	33,989	82,480	189,526	63,593	335,599	593,119	675,028
1966-70	115,954	43,758	159,712	281,097	71,746	512,555	1,294,118	1,541,605
1968	23,814	7,861	31,675	51,386	12,617	95,678	251,880	311,181
1969	24,739	8,892	33,631	59,027	15,602	108,260	288,805	372,747
1970	26,756	10,538	37,294	64,215	18,727	120,236	352,526	431,039
1971	29,449	11,673	41,122	67,699	21,433	130,254	413,917	450,022
1972	33,172	12,709	45,881	66,853	24,251	136,985	504,519	441,320

#### Permanent movement

In the following paragraphs particulars are given of the persons who on arrival in Australia stated that they came intending to settle, and of Australian residents who on their departure from Australia stated their intention of residing permanently abroad, classified according to nationality, occupation, age, marital status, and State or Territory of intended residence (arrivals) or of last residence (departures).



## Nationality

**OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT  
NATIONALITY, AUSTRALIA, 1971 AND 1972**  
(Persons)

Nationality	1971				1972			
	Arrivals			Departures	Arrivals			Departures
	Assisted (a)	Other	Total		Assisted (a)	Other	Total	
<b>British—</b>								
Country of citizenship—								
Australia . . . . .	672	1,925	2,597	11,316	418	2,051	2,469	12,245
Canada . . . . .	151	2,273	2,424	423	108	1,843	1,951	718
Bangladesh, India, Pakistan(b), Sri Lanka . . . . .	2	3,872	3,874	57	2	3,666	3,668	69
Ireland(b) . . . . .	1,970	257	2,227	474	1,405	452	1,857	587
Malta . . . . .	1,123	281	1,404	389	937	578	1,515	319
New Zealand . . . . .	55	4,410	4,465	2,442	33	3,390	3,423	2,934
South Africa(b) . . . . .	586	780	1,366	135	226	866	1,092	189
United Kingdom and Colonies . . . . .	48,628	8,747	57,375	16,751	36,193	13,360	49,553	17,933
Other countries . . . . .	88	2,289	2,377	226	59	1,858	1,917	227
Citizenship not stated . . . . .	2,014	1,702	3,716	1,229	1,193	1,582	2,775	1,152
<b>Total, British . . . . .</b>	<b>55,289</b>	<b>26,536</b>	<b>81,825</b>	<b>33,442</b>	<b>40,574</b>	<b>29,646</b>	<b>70,220</b>	<b>36,373</b>
<b>American (U.S.) . . . . .</b>	<b>3,613</b>	<b>2,978</b>	<b>6,591</b>	<b>1,046</b>	<b>2,189</b>	<b>2,710</b>	<b>4,899</b>	<b>1,959</b>
Austrian . . . . .	473	109	582	167	186	108	294	219
Dutch . . . . .	1,705	435	2,140	1,097	860	406	1,266	1,069
French . . . . .	1,995	199	2,194	381	1,235	220	1,455	499
German . . . . .	2,398	470	2,868	979	1,256	507	1,763	1,074
Greek . . . . .	5,662	3,145	8,807	419	2,234	1,989	4,223	386
Italian . . . . .	4,604	2,011	6,615	860	2,938	1,611	4,549	929
Lebanese . . . . .	17	3,781	3,798	45	24	2,443	2,467	35
Portuguese . . . . .	1,139	576	1,715	24	816	436	1,252	61
Spanish . . . . .	1,724	271	1,995	132	911	270	1,181	173
Swiss . . . . .	990	187	1,177	401	483	199	682	427
Turkish . . . . .	2,780	486	3,266	16	875	755	1,630	47
Yugoslav . . . . .	14,267	4,121	18,388	526	5,149	2,109	7,258	734
Other, including stateless . . . . .	7,155	6,409	13,564	1,587	3,980	5,349	9,329	1,896
<b>Grand total . . . . .</b>	<b>103,811</b>	<b>51,714</b>	<b>155,525</b>	<b>41,122</b>	<b>63,710</b>	<b>48,758</b>	<b>112,468</b>	<b>45,881</b>

(a) For details of assisted passage schemes see pages 155-6. of this table.

(b) Included with 'British nationality' for the purpose

## Occupation

**OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT  
OCCUPATION AND SEX, AUSTRALIA, 1971 AND 1972**

Occupation group	1971				1972			
	Arrivals		Departures		Arrivals		Departures	
	Males	Females	Males	Females	Males	Females	Males	Females
Professional, technical, and related workers . . . . .	6,920	3,678	2,230	1,448	5,763	3,595	2,535	1,694
Administrative, executive, and managerial workers . . . . .	2,785	328	1,104	133	2,170	318	1,324	147
Clerical workers . . . . .	2,353	5,358	888	2,444	1,863	4,940	930	2,791
Sales workers . . . . .	2,020	902	626	385	1,520	704	759	408
Farmers, fishermen, hunters, timber getters, and related workers . . . . .	1,327	49	327	10	737	25	313	16
Miners, quarrymen, and related workers . . . . .	191	..	134	..	117	..	127	..
Workers in transport and communication . . . . .	2,640	361	759	162	1,954	335	834	152
Craftsmen and production-process workers . . . . .	20,520	2,506	5,296	556	14,601	1,683	5,829	603
Labourers(a) . . . . .	7,143	..	1,456	..	4,238	..	1,530	..
Service (protective and other), sport, and recreation workers . . . . .	2,018	4,114	555	593	1,502	3,253	717	664
Occupation inadequately described or not stated . . . . .	4,172	679	500	95	2,391	553	516	91
Persons not in work force—								
Children and students . . . . .	28,032	25,880	6,866	6,389	19,298	17,720	7,772	7,121
Others . . . . .	1,411	30,138	586	7,580	1,669	21,519	693	8,315
<b>Total . . . . .</b>	<b>81,532</b>	<b>73,993</b>	<b>21,327</b>	<b>19,795</b>	<b>57,823</b>	<b>54,645</b>	<b>23,879</b>	<b>22,002</b>

(a) Labourers (so described), not elsewhere classified and freight handlers, including waterside workers.

*Age and marital status***OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT, BY SEX  
AGE DISTRIBUTION, AND MARITAL STATUS, AUSTRALIA, 1972**

<i>Age last birthday on arrival or departure</i>	<i>Arrivals</i>				<i>Departures</i>			
	<i>Never married</i>	<i>Married</i>	<i>Widowed or divorced</i>	<i>Total</i>	<i>Never married</i>	<i>Married</i>	<i>Widowed or divorced</i>	<i>Total</i>
<b>MALES</b>								
0-4 . . .	7,274	..	..	7,274	2,994	..	..	2,994
5-14 . . .	9,843	..	..	9,843	4,061	..	..	4,061
15-24 . . .	10,875	3,349	44	14,268	3,204	947	10	4,161
25-44 . . .	5,052	15,178	524	20,754	2,535	6,855	185	9,575
45-64 . . .	302	3,746	266	4,314	205	2,114	161	2,480
65 and over . . .	49	990	331	1,370	45	419	144	608
<i>Total</i> . . .	<b>33,395</b>	<b>23,263</b>	<b>1,165</b>	<b>57,823</b>	<b>13,044</b>	<b>10,335</b>	<b>500</b>	<b>23,879</b>

<b>FEMALES</b>								
0-4 . . .	6,736	..	..	6,736	2,730	..	..	2,730
5-14 . . .	9,278	..	..	9,278	3,782	..	..	3,782
15-24 . . .	7,328	6,988	78	14,394	2,295	2,210	33	4,538
25-44 . . .	2,583	14,166	546	17,295	1,059	6,406	240	7,705
45-64 . . .	286	3,511	1,317	5,114	141	1,739	472	2,352
65 and over . . .	89	672	1,067	1,828	48	306	541	895
<i>Total</i> . . .	<b>26,300</b>	<b>25,337</b>	<b>3,008</b>	<b>54,645</b>	<b>10,055</b>	<b>10,661</b>	<b>1,286</b>	<b>22,002</b>

<b>PERSONS</b>								
0-4 . . .	14,010	..	..	14,010	5,724	..	..	5,724
5-14 . . .	19,121	..	..	19,121	7,843	..	..	7,843
15-24 . . .	18,203	10,337	122	28,662	5,499	3,157	43	8,699
25-44 . . .	7,635	29,344	1,070	38,049	3,594	13,261	425	17,280
45-64 . . .	588	7,257	1,583	9,428	346	3,853	633	4,832
65 and over . . .	138	1,662	1,398	3,198	93	725	685	1,503
<i>Total</i> . . .	<b>59,695</b>	<b>48,600</b>	<b>4,173</b>	<b>112,468</b>	<b>23,099</b>	<b>20,996</b>	<b>1,786</b>	<b>45,881</b>

*State or Territory of intended residence (arrivals) or last residence (departures).* The following table shows the number of settlers arriving in Australia by State or Territory of intended residence and the number of Australian residents departing permanently by State or Territory of last residence, for the years 1970 to 1972. Settlers are asked, on or before arrival, the State or Territory of Australia in which they next intend to stay for twelve months or more. The statements represent the settlers' intentions at the time and these may not be realised. Residents departing permanently are asked the State or Territory in which they last stayed for twelve months or more. The allocation to States and Territories in the table is based on these statements, except that settlers proceeding to the migrant reception centre, Bonegilla, Victoria, were allocated, as far as was practicable, to the State or Territory of their placement from the centre. The migrant reception centre was closed late in 1971.

**OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT  
SETTLERS ARRIVING AND RESIDENTS DEPARTING, BY STATE OR TERRITORY OF  
INTENDED RESIDENCE (ARRIVALS) OR LAST RESIDENCE (DEPARTURES), 1970 TO 1972  
(Persons)**

<i>State or Territory of intended residence (arrivals) or last residence (departures)</i>	<i>Settlers arriving</i>			<i>Residents departing</i>		
	<i>1970</i>	<i>1971</i>	<i>1972</i>	<i>1970</i>	<i>1971</i>	<i>1972</i>
New South Wales . . .	72,563	60,530	42,206	12,379	13,914	16,090
Victoria . . .	49,013	41,917	28,573	8,026	8,687	8,775
Queensland . . .	11,467	10,397	9,880	3,554	3,756	4,077
South Australia . . .	17,256	13,348	10,406	3,583	3,625	4,224
Western Australia . . .	23,082	19,743	14,128	4,251	5,047	5,863
Tasmania . . .	1,979	1,323	1,056	613	636	665
Northern Territory . . .	521	607	696	265	346	353
Australian Capital Territory . . .	1,542	1,296	1,091	517	495	658
Not stated(a) . . .	7,902	6,364	4,432	4,106	4,616	5,176
<i>Total</i> . . .	<b>185,325</b>	<b>155,525</b>	<b>112,468</b>	<b>37,294</b>	<b>41,122</b>	<b>45,881</b>

(a) Includes settlers passing through the migrant reception centre who were not placed in time for allocation to States.

*Former settlers and other residents departing permanently—country of intended residence.* The principal countries of intended residence of persons departing permanently during the years 1971 and 1972 are shown in the following table for 'former settlers' departing permanently (*see* definition on page 151) and other residents departing permanently.

**OVERSEAS DEPARTURES—PERMANENT MOVEMENT**  
**COUNTRY OF INTENDED RESIDENCE(a)**  
**AUSTRALIA, 1971 AND 1972**

Country of intended residence(a)	1971			1972		
	Former settlers	Other residents	Total	Former settlers	Other residents	Total
Canada . . . . .	731	617	1,348	895	560	1,455
New Zealand . . . . .	3,599	2,811	6,410	4,382	3,520	7,902
Papua New Guinea . . . . .	271	1,798	2,069	286	1,364	1,650
United Kingdom and Ireland . . . . .	16,002	2,397	18,399	17,160	2,781	19,941
Other Commonwealth countries . . . . .	955	933	1,888	916	963	1,879
<i>Total, Commonwealth countries</i>	<i>21,558</i>	<i>8,556</i>	<i>30,114</i>	<i>23,639</i>	<i>9,188</i>	<i>32,827</i>
Germany . . . . .	977	261	1,238	1,064	289	1,353
Italy . . . . .	802	260	1,062	848	308	1,156
Netherlands . . . . .	1,009	373	1,382	952	380	1,332
Other European countries . . . . .	2,834	625	3,459	3,492	816	4,308
United States of America . . . . .	1,176	950	2,126	1,923	994	2,917
Other countries . . . . .	1,093	648	1,741	1,254	734	1,988
<i>Total, foreign countries</i>	<i>7,891</i>	<i>3,117</i>	<i>11,008</i>	<i>9,533</i>	<i>3,521</i>	<i>13,054</i>
<b>Grand total . . . . .</b>	<b>29,449</b>	<b>11,673</b>	<b>41,122</b>	<b>33,172</b>	<b>12,709</b>	<b>45,881</b>

(a) For a period of twelve months or more.

## IMMIGRATION INTO AUSTRALIA

### Powers and legislation of the Commonwealth

Under Section 51 (xix), (xxvii) and (xxviii) of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration, emigration, aliens and the influx of criminals. Immigration into Australia is regulated by the *Migration Act* 1958–1966 which came into force on 1 June 1959.

Any immigrant entering Australia after the commencement of the Act without having been granted an 'entry permit' or who is not within an exempted class is a prohibited immigrant. Exempted persons include diplomatic, consular and trade representatives of other countries, and seamen who enter with leave while their ships are in Australian ports. For the purposes of the Migration Act an immigrant includes a person entering for temporary stay.

An entry permit is normally granted at the port of entry by means of a stamp in the traveller's passport or equivalent travel document. Temporary permits are granted to visitors and persons whose stay is to be of limited duration. For other persons permits are issued without limitation as to stay. A person who is refused an entry permit must not be permitted (by the carrier company) to enter Australia; otherwise the carrier company is liable to a fine of \$1,000.

The Act contains provision for the deportation of persons who enter Australia without an entry permit, who overstay their approved period of residence or who are convicted of crimes.

The Act does *not* affect passport or visa requirements for travel to Australia.

The *Aliens Act* 1947–1966 provides that a register of aliens shall be maintained for every State and mainland Territory of Australia. Unless exempted, aliens 16 years of age and over are required to register with the Department of Immigration and to notify that Department of their address, occupation, or employment during the month of September each year. They are required to notify marriage within thirty days of marriage taking place. The Act provides also that the consent of the Department must be obtained before an alien may change his surname.



The *Immigration (Guardianship of Children) Act* 1946-1966 provides that the Minister for Immigration becomes the legal guardian of every person under the age of 21 years who enters Australia (except for certain exempted groups) other than in the charge of, or for the purpose of living in the care of, a parent or adult relative. It is primarily administered through the child welfare authorities in each State and mainland Territory who, as the Minister's delegates under the Act, supervise the welfare of each 'immigrant child'.

## Department of Immigration

### Functions of the Department of Immigration

The functions of the Department of Immigration include: administration of immigration policy; planning immigration programs; consideration of all applications for permanent and temporary residence; formulation of policy in relationship to international organisations and international conventions; Australian citizenship; passports; emigration; deportation; prevention of illegal entry; migrant accommodation; migrant education and settlement; and research into effects of immigration.

### Immigration Program 1972-73

The number of settlers reaching Australia during the financial year 1972-73 should total 110,000, including some 60,000 financially assisted.

### Immigration Policy

The Government's policy gives special emphasis to family reunion and sponsored migration. It also provides for specific national needs. Within Australia, citizenship and the settlement of migrants is of primary importance.

## Assisted migration into Australia

Detailed statistics of assisted migration into Australia are shown in *Australian Immigration: Consolidated Statistics* and *Australian Immigration: Quarterly Statistical Summary* published by the Department of Immigration.

Immigration has been a major factor in Australia's economic growth and since 1945 successive Australian governments have borne a substantial part of the passage costs of selected migrants from overseas countries.

The following tables show total assisted migration since 1947 and arrivals under other assisted passage schemes and arrangements.

### ASSISTED MIGRATION: AUSTRALIA, 1947 TO 1972

Period	Nominated and selected (assisted) arrivals
1947-50 . . . . .	273,195
1951-55 . . . . .	275,241
1956-60 . . . . .	305,517
1961-65 . . . . .	337,132
1966-70 . . . . .	537,478
1965 . . . . .	93,653
1966 . . . . .	89,743
1967 . . . . .	82,247
1968 . . . . .	105,102
1969 . . . . .	125,958
1970 . . . . .	134,428
1971 . . . . .	103,811
1972 . . . . .	63,710

Details of the joint scheme of assisted immigration arrived at by agreement between the Commonwealth and State Governments, which operated from 1920 to 1939, were published in earlier issues of the Year Book (see No. 38, page 576). After the outbreak of hostilities in 1939 it was decided to discontinue the grant of assisted passages for the duration of the war. Details of assisted migration schemes which have operated since 1947 are shown in earlier issues of the Year Book (see No. 58, page 153).

**UNITED KINGDOM ASSISTED PASSAGE AGREEMENT: NUMBER OF MIGRANTS(a)  
STATES AND TERRITORIES OF INTENDED RESIDENCE  
JANUARY 1947 TO JUNE 1972**

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T. and N.T.</i>	<i>Cwlth</i>
January 1947 to								
June 1964 . . . . .	165,789	155,676	58,122	73,168	51,091	14,324	6,098	524,268
1964-65 . . . . .	23,759	16,986	6,385	15,676	6,336	1,161	385	70,688
1965-66 . . . . .	21,546	14,862	5,671	17,065	9,965	1,183	462	70,754
1966-67 . . . . .	20,586	14,995	5,538	13,768	13,965	1,234	484	70,570
1967-68 . . . . .	16,297	11,929	4,639	8,384	13,034	1,196	398	55,877
1968-69 . . . . .	23,754	14,705	5,954	12,046	14,990	1,536	399	73,384
1969-70 . . . . .	22,583	13,448	5,843	11,515	13,955	1,268	423	69,035
1970-71 . . . . .	16,932	10,801	5,095	10,003	12,431	1,137	456	56,855
1971-72 . . . . .	14,345	8,692	4,662	7,477	8,737	598	323	44,834
<b>Total January 1947 to June 1972 . . . . .</b>	<b>325,591</b>	<b>262,094</b>	<b>101,909</b>	<b>169,102</b>	<b>144,504</b>	<b>23,637</b>	<b>9,428</b>	<b>1,036,265</b>

(a) Includes child migrants.

**ARRIVALS UNDER ASSISTED MIGRATION SCHEMES: AUSTRALIA, JANUARY 1947  
TO JUNE 1972**

<i>Assisted migration scheme</i>	<i>January 1947 to June 1967</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>	<i>January 1947 to June 1972</i>
Austrian . . . . .	19,865	466	419	555	440	227	21,972
Belgian . . . . .	2,062	249	262	201	167	159	3,100
General Assisted Passage(a)	34,628	2,101	2,467	1,192	..	..	40,388
German . . . . .	81,869	3,204	2,449	3,148	2,622	1,491	94,783
Greek . . . . .	45,309	4,188	6,189	6,249	6,198	3,088	71,221
Italian . . . . .	41,596	1,381	4,686	5,257	4,615	3,641	61,176
Maltese . . . . .	38,386	910	755	641	1,048	904	42,644
Netherlands . . . . .	71,820	1,781	2,406	2,304	1,724	1,223	81,258
Refugee . . . . .	215,247	3,226	7,613	16,495	11,812	3,259	257,652
Spanish . . . . .	8,168	82	878	1,130	1,013	856	12,127
Special Passage Assistance Programme(b) . . . . .	4,638	11,170	14,508	20,437	22,578	15,918	89,249
Turkish . . . . .	..	..	2,014	3,542	3,369	1,822	10,747
United Kingdom . . . . .	736,280	55,877	73,384	69,035	56,855	44,834	1,036,265
Yugoslav . . . . .	..	..	..	..	5,853	4,135	9,988
Other schemes . . . . .	28,098	..	439	1,682	1,553	786	32,558
<b>Total . . . . .</b>	<b>1,327,966</b>	<b>84,635</b>	<b>118,469</b>	<b>131,868</b>	<b>119,847</b>	<b>82,343</b>	<b>1,865,128</b>

(a) Mostly Scandinavians, U.S. Americans, and British nationals from countries other than the United Kingdom.  
(b) Includes United States Passage Assistance Programme (U.S.P.A.P.).

**Accommodation of migrants**

Migrants must be assured of accommodation on arrival, unless they have sufficient funds to be independent. For those migrants nominated by relatives or friends this initial accommodation has usually been in private homes. Most of the assisted migrants nominated by the Australian Government are provided with transitory accommodation in migrant hostels operated by Commonwealth Hostels Ltd, a non-profit making Government-sponsored company registered in Victoria. These hostels, which provide a range of services to help migrants to settle in Australia, are progressively being improved to provide accommodation with private facilities for all families. The total capacity of hostels is now about 13,000. A further 2,000 migrants nominated by the Commonwealth can be accommodated in self-contained flats. Hostel accommodation is available to families for up to 12 months, while tenancies of flats are limited to six months. For Commonwealth nominated migrant families wishing to settle in country areas there is an arrangement involving subsidised boarding-house accommodation for up to six months. Single unaccompanied migrant women are provided with subsidised accommodation for up to three months in capital cities in hostels run by organisations such as the Y.W.C.A.

British assisted migrants nominated by State Governments are provided with initial accommodation in reception centres operated by the State immigration authorities. The Commonwealth Government contributes to the capital cost of these establishments on a dollar for dollar basis.

### **Immigration Advisory, Planning and Publicity Councils**

Three bodies have been established to advise the Minister for Immigration on the social, economic and publicity aspects of the immigration program.

The *Immigration Advisory Council*, established in 1947, is representative of a broad cross-section of the Australian community. Members, in general, represent national organisations e.g. the Australian Council of Trade Unions, the Returned Servicemen's League of Australia, and the National Youth Council. The Council advises the Minister on the integration of migrants.

The *Immigration Planning Council*, established in 1949 comprises members of the community who are recognised leaders in industry and commerce (trade unions and employers), demography, economics, finance, science and town planning. The Council advises the Minister on the economic considerations affecting the immigration program, size, and distribution of future population and urban environmental development.

The *Immigration Publicity Council*, established in 1962, advises on publicity and publications used in Australia and overseas. Its members represent the press (including the foreign language newspapers), radio, advertising and television interests.

### **Professional migration**

The Department of Immigration, working in co-operation with the Department of Labour, provides a special service, including advisory staff in London, by giving advice and information to professionally qualified persons on prospects in Australia and by putting such applicants in touch with Australian employers.

On 27 March 1969, a Committee on Overseas Professional Qualifications was established. It has the task of collating information about overseas professional qualifications and evaluating their comparability with Australian qualifications.

## **Passports**

Australian passports are issued under the *Passports Act* 1938-1966 and Passport Regulations. Passports are obtainable on application at offices of the Commonwealth Department of Immigration in each State, the Northern Territory, and the Australian Capital Territory, from overseas offices of that Department, from any Australian diplomatic or consular mission abroad, or from the office of any Australian Government Trade Commissioner overseas. Applicants for passports must furnish evidence of their identity and citizenship and pay a fee of four dollars. Approximately 250,000 Australian passports are issued each year in Australia and abroad.

## **Citizenship**

### **Commonwealth legislation**

The *Nationality and Citizenship Act* 1948 which came into force on 26 January 1949 created the status of 'Australian citizen'. On 4 June 1969 the Act became the *Citizenship Act* 1948-1969.

Australian citizenship may be acquired (a) by birth in Australia, (b) by birth abroad subject to registration of the birth at an Australian Consulate, and (c) by grant of citizenship to persons resident in Australia under the conditions prescribed in the Act.

The Act recognises the independence of married women. Australian citizenship is not lost solely by marriage to an alien nor do alien women automatically acquire Australian citizenship upon marriage to an Australian citizen. Alien wives of Australian citizens may acquire citizenship under easier conditions than those which apply to other aliens.



## TOTAL PERSONS GRANTED AUSTRALIAN CITIZENSHIP, 1971-72

## NATIONALITY

Argentinian . . . . .	40	French . . . . .	190	Maltese . . . . .	752	Syrian . . . . .	99
Australian pro- tected person . . . . .	83	German . . . . .	1,352	Mauritian . . . . .	863	Trinidad and Tobago, cit. . . . .	34
Austrian . . . . .	325	Greek . . . . .	5,949	New Zealander . . . . .	263	Turkish . . . . .	146
Belgian . . . . .	125	Hungarian . . . . .	469	Norwegian . . . . .	30	Ukrainian . . . . .	62
Burmese . . . . .	287	Indian . . . . .	2,647	Pakistani . . . . .	64	United Kingdom and Colonies, cit. of . . . . .	4,800
Sri Lankan . . . . .	925	Indonesian . . . . .	32	Polish . . . . .	1,049	U.S. American . . . . .	179
Chinese . . . . .	337	Iranian . . . . .	46	Portuguese . . . . .	105	Yugoslav . . . . .	3,496
Cypriot . . . . .	660	Iraqi . . . . .	66	Rhodesian . . . . .	37	Other . . . . .	365
Czechoslovak . . . . .	936	Irish . . . . .	143	Romanian . . . . .	36	<b>Total . . . . .</b>	<b>37,893</b>
Danish . . . . .	118	Israeli . . . . .	229	Russian . . . . .	247		
Dutch . . . . .	1,301	Italian . . . . .	4,363	Singaporean . . . . .	220		
Egyptian . . . . .	1,113	Jordanian . . . . .	105	Spanish . . . . .	264		
Fijian . . . . .	77	Latvian . . . . .	59	South African . . . . .	539		
Filipino . . . . .	129	Lebanese . . . . .	1,101	Stateless . . . . .	170		
Finnish . . . . .	182	Lithuanian . . . . .	26	Swedish . . . . .	39		
		Malaysian . . . . .	441	Swiss . . . . .	178		

## FORMER ALIENS GRANTED AUSTRALIAN CITIZENSHIP, 1971-72

Argentinian . . . . .	40	Filipino . . . . .	129	Jordanian . . . . .	105	Swedish . . . . .	39
Australian pro- tected person . . . . .	83	Finnish . . . . .	182	Latvian . . . . .	59	Swiss . . . . .	178
Austrian . . . . .	325	French . . . . .	190	Lebanese . . . . .	1,101	Syrian . . . . .	99
Belgian . . . . .	125	German . . . . .	1,352	Lithuanian . . . . .	26	Turkish . . . . .	146
Burmese . . . . .	287	Greek . . . . .	5,949	Norwegian . . . . .	30	Ukrainian . . . . .	62
Chinese . . . . .	337	Hungarian . . . . .	469	Polish . . . . .	1,049	U.S. American . . . . .	179
Czechoslovak . . . . .	936	Indonesian . . . . .	32	Portuguese . . . . .	105	Yugoslav . . . . .	3,496
Danish . . . . .	118	Iranian . . . . .	46	Romanian . . . . .	36	Other . . . . .	233
Dutch . . . . .	1,301	Iraqi . . . . .	66	Russian . . . . .	247	<b>Total . . . . .</b>	<b>25,296</b>
Egyptian . . . . .	1,113	Israeli . . . . .	229	Spanish . . . . .	264		
		Italian . . . . .	4,363	Stateless . . . . .	170		

## FORMER ALIENS GRANTED AUSTRALIAN CITIZENSHIP JANUARY 1945 TO JUNE 1972

<i>Previous nationality</i>	<i>Previous nationality</i>	<i>Previous nationality</i>	<i>Previous nationality</i>
Albanian . . . . .	Egyptian . . . . .	Jordanian . . . . .	Swedish . . . . .
Australian pro- tected person . . . . .	Estonian . . . . .	Latvian . . . . .	Swiss . . . . .
Austrian . . . . .	Finnish . . . . .	Lebanese . . . . .	Syrian . . . . .
Belgian . . . . .	French . . . . .	Lithuanian . . . . .	Turkish . . . . .
Bulgarian . . . . .	German . . . . .	Norwegian . . . . .	Ukrainian . . . . .
Burmese . . . . .	Greek . . . . .	Polish . . . . .	U.S. American . . . . .
Chinese . . . . .	Hungarian . . . . .	Portuguese . . . . .	Yugoslav . . . . .
Czechoslovak . . . . .	Iraqi . . . . .	Romanian . . . . .	Others . . . . .
Danish . . . . .	Israeli . . . . .	Russian . . . . .	
Dutch . . . . .	Italian . . . . .	Spanish . . . . .	<b>Total . . . . .</b>
	Japanese . . . . .	Stateless . . . . .	<b>688,194</b>

More detailed statistics of persons granted Australian citizenship are shown in *Australian Immigration: Consolidated Statistics* published by the Department of Immigration.

### Migrant integration

Integration services assist migrants to settle in Australia. In addition to the direct service provided by the Department of Immigration through social workers, welfare and integration officers and a translation and interpreting service, the program includes the following activities.

Migrant education services are available to help migrants to overcome language problems and to settle effectively into the Australian community. For adults instruction is provided in source countries before embarkation, on board ship and after arrival in Australia. Since April 1970 the special needs of certain groups of migrants, e.g. professional workers, women, adolescents, industrial workers, are being met by greater stress on accelerated forms of instruction and the development and use of television programmes and other audio-visual aids. Special English classes are also provided for migrant children in migrant hostels and in schools. Authority for these activities derives from the *Immigration (Education) Act* 1971. At 30 June 1972, 26,814 migrants were receiving instruction under the adult program in Australia and 34,806 children were receiving special tuition under the child migrant education program. Additional information on expenditure and other aspects of the Migrant Education program is available in the Report to Parliament on 19 September 1972. (*See also* Migrant Education, in Education, Cultural Activities and Research chapter.)

As it is not always possible for migrants to have access to social workers in the capital city offices of the Department of Immigration, grants are paid by the Government to selected community-based voluntary welfare agencies to employ additional social workers to assist migrants locally.

Ethnic communities play an important part in the settlement of migrants. During 1969 a National Group Liaison Unit was created to develop links with ethnic organisations. A survey, covering 905 of the 1,898 known ethnic organisations in Australia was conducted to ascertain their activities, services and potential and a report is being prepared.

Following a survey of interpreter needs in the community, an emergency twenty-four hour on-call telephone interpreter service commenced in February 1973 at the Department's Sydney and Melbourne offices and later in the other capital city offices.

A team of psychologists undertakes surveys and other research into migrant integration and welfare in Australia and migrant selection overseas. Important areas of this research are studies of the general background, motivation and post-arrival experiences of immigrants generally and of particular groups, including investigations into practical short and long term difficulties experienced during the process of integration. Studies are also undertaken on aspects of more general relevance to migrant integration and their welfare and adjustments. The information gained facilitates the evaluation of current programs and policies bearing upon the settlement and integration of immigrants in Australia and their selection and counselling overseas.

Eight Good Neighbour Councils in the six States and two Territories of Australia operate as autonomous voluntary organisations. These Councils co-ordinate and co-operate with the many community groups and people throughout Australia whose common objective is to assist migrants to integrate. In certain instances Councils offer direct services to migrants and are financially sponsored by grants from the Commonwealth Government. These grants enabled Councils at 1 January 1972, to pay the administrative costs involved in maintaining central offices in the capital cities, ten regional offices and five sub-offices as well as employing some seventy staff members. At the same time the Councils worked with more than 900 organisations and controlled a net-work of 86 branches and 530 representatives in cities and towns.





## CHAPTER 8

### VITAL STATISTICS

The tables in this chapter are confined to the principal characteristics of vital statistics for Australia and relate, in the main, to the year 1972 for marriages and 1971 for births, deaths, and infant deaths. Comparisons have been restricted, in general, to the individual years 1968 to 1972 and the five-year periods 1946-50 to 1966-70, while age data have been shown in five-year groups. Comparisons over longer periods, together with more detailed figures such as single age particulars and cross-classifications of various characteristics, are published in the annual bulletins, *Demography* (4.9) and *Causes of Death* (4.7). Current information is published in the *Monthly Review of Business Statistics* (1.4), the *Quarterly Summary of Australian Statistics* (1.3), the mimeograph bulletins *Births* (4.4), *Deaths* (4.8), *Marriages* (4.10) (annual) and *Vital and Population Statistics* (quarterly) (4.11).

In most tables the statistics of births, deaths and marriages exclude particulars of full-blood Aborigines for years before 1966. Differences between the statistics now published and those formerly published which implied the exclusion of Aboriginal vital events cannot be taken as reliable statistics of births, deaths, or marriages among full-blood Aborigines, because in many areas no satisfactory administrative or other basis existed for distinguishing vital events of full-blood Aborigines from those of part-Aborigines or the rest of the population.

Vital statistics for certain countries of the world are set out in International Vital Statistics at the end of this chapter.

#### Provisions for registration and compilation of statistics

In Australia, vital statistics are compiled from information supplied for the registration of births, deaths, and marriages. Each State and Territory has an independent system of registration. Provisions for the civil registration of births, deaths, and marriages have been in force in Tasmania from 1839, in Western Australia from 1841, in South Australia from 1842, in Victoria from 1853, and in New South Wales and Queensland (then part of New South Wales) from 1856. Registration in the Territories is administered by the Commonwealth Government, registration having been taken over from South Australia in 1911 in respect of the Northern Territory and from New South Wales in 1930 in respect of the Australian Capital Territory. The authority responsible for the registration of births, deaths, and marriages occurring within his particular State or Territory is the Registrar-General (the Government Statist in Victoria) or the Principal Registrar.

The statistics in this chapter refer to events registered by the State and Territorial registrars during the year shown. There is usually an interval of at least several days between the occurrence and the registration of an event. As a result of the delay in registration some events occurring in one year are not registered until the following year. Events which are registered more than ten years after date of occurrence are excluded from the statistics.

For tables showing statistics for the States and Territories, figures are compiled from registrations of events which took place in each State and Territory. Some events take place in States other than the State in which the persons concerned (e.g. mother, deceased, bride/groom) usually resided. The effect of such interstate registrations on State totals however is slight. See page 166.

## Marriages

The *Marriage Act* 1961-1966 came into operation on 1 September 1963, placing the marriage laws of all States, the mainland Territories and Norfolk Island on a uniform basis. Provision is made for the celebration of marriage by ministers of religion registered with the Registrar of Ministers of Religion appointed in each State and Territory by the Attorney-General, and by certain civil officers, in most cases district registrars. In each State or Territory the authorised celebrant is required to register particulars of the parties married with the appropriate registering authority as soon as practicable and in any case not later than fourteen days after the marriage.

The marriage of minors is not permissible without the consent of parents or guardians or (where this is not obtainable) of a magistrate or some other prescribed authority. The *Marriage Act* 1961-1966 provides that the minimum age at which persons are legally free to marry is 18 years for males and 16 years for females. A judge or magistrate may, in exceptional circumstances, make an order authorising a male who has attained 16 years or a female who has attained 14 years to marry a person of marriageable age.

### Numbers of marriages and crude marriage rates

#### MARRIAGES(a): STATES AND TERRITORIES, 1946 TO 1972

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1946-50 . . .	30,162	20,453	10,666	6,581	5,205	2,529	114	181	75,891
1951-55 . . .	28,483	20,007	10,171	6,290	5,232	2,539	146	234	73,102
1956-60 . . .	28,432	20,422	10,254	6,517	5,145	2,573	190	321	73,854
1961-65 . . .	31,788	23,262	11,437	7,514	5,768	2,700	248	533	83,250
1966-70 . . .	39,216	29,481	14,717	9,920	8,147	3,330	394	983	106,188
Annual total—									
1968 . . .	39,213	29,724	14,860	9,652	8,086	3,426	419	965	106,345
1969 . . .	41,286	30,860	15,669	10,599	8,993	3,532	413	1,118	112,470
1970 . . .	42,928	31,729	16,082	10,864	9,227	3,535	501	1,200	116,066
1971 . . .	43,038	32,386	16,538	10,833	9,382	3,578	485	1,397	117,637
1972 . . .	41,520	31,206	16,066	10,829	9,120	3,426	490	1,372	114,029

(a) Excludes particulars of full-blood Aborigines before 1966.

#### CRUDE MARRIAGE RATES(a): STATES AND TERRITORIES, 1946 TO 1972

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average annual rate—									
1946-50 . . .	9.90	9.72	9.41	9.87	10.01	9.56	9.39	9.36	9.77
1951-55 . . .	8.41	8.34	7.91	8.11	8.44	8.35	9.13	8.20	8.29
1956-60 . . .	7.70	7.50	7.14	7.26	7.36	7.69	8.63	7.51	7.50
1961-65 . . .	7.86	7.64	7.27	7.42	7.43	7.49	8.09	7.26	7.63
1966-70 . . .	8.96	8.84	8.49	8.82	8.87	8.76	5.81	8.68	8.81
Annual rate—									
1968 . . .	8.99	8.93	8.59	8.60	8.83	9.02	6.20	8.60	8.85
1969 . . .	9.29	9.11	8.88	9.30	9.41	9.17	5.65	9.19	9.16
1970 . . .	9.48	9.20	8.96	9.38	9.28	9.11	6.32	9.10	9.26
1971 . . .	9.33	9.23	9.03	9.21	9.09	9.15	5.60	9.68	9.20
1972 . . .	8.89	8.78	8.58	9.10	8.63	8.71	5.26	8.67	8.78

(a) Number of marriages per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1966.

The crude marriage rates for Australia and the more populous countries of the world are shown for the latest available year in International Vital Statistics at the end of this chapter.

**Previous marital status**

In most years about ninety per cent of grooms and brides are single at marriage, six per cent divorced and three per cent widowed.

**PREVIOUS MARITAL STATUS OF BRIDEGROOMS AND  
BRIDES: AUSTRALIA, 1972**

<i>Previous marital status of bridegrooms</i>	<i>Previous marital status of brides</i>			<i>Total bride- grooms</i>
	<i>Spinsters</i>	<i>Widows</i>	<i>Divorced</i>	
Bachelors . . .	96,925	1,159	4,156	102,240
Widowers . . .	802	1,732	938	3,472
Divorced . . .	4,379	977	2,961	8,317
<b>Total brides . .</b>	<b>102,106</b>	<b>3,868</b>	<b>8,055</b>	<b>114,029</b>

**Age and previous marital status at marriage**

There were 18,011 males under 21 years of age married during 1972, while the corresponding number of females was 50,754.

**AGE AND PREVIOUS MARITAL STATUS OF BRIDEGROOMS AND BRIDES  
AUSTRALIA, 1972**

<i>Age at marriage (years)</i>	<i>Bridegrooms</i>				<i>Brides</i>			
	<i>Bachelors</i>	<i>Widowers</i>	<i>Divorced</i>	<i>Total</i>	<i>Spinsters</i>	<i>Widows</i>	<i>Divorced</i>	<i>Total</i>
Under 20 . . .	8,746	..	..	8,746	34,836	9	3	34,848
20-24 . . .	60,706	29	199	60,934	53,106	128	823	54,057
25-29 . . .	23,225	101	1,534	24,860	10,009	224	2,029	12,262
30-34 . . .	5,448	131	1,611	7,190	2,278	221	1,454	3,953
35-39 . . .	1,836	149	1,272	3,257	823	283	1,116	2,222
40-44 . . .	971	242	1,104	2,317	396	393	876	1,665
45-49 . . .	601	369	1,016	1,986	265	536	839	1,640
50-54 . . .	322	429	711	1,462	177	555	503	1,235
55-59 . . .	184	543	438	1,165	94	541	256	891
60-64 . . .	115	495	269	879	50	440	100	590
65 and over . .	86	984	163	1,233	72	538	56	666
<b>Total . . .</b>	<b>102,240</b>	<b>3,472</b>	<b>8,317</b>	<b>114,029</b>	<b>102,106</b>	<b>3,868</b>	<b>8,055</b>	<b>114,029</b>

**RELATIVE AGES OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1972**

<i>Age of bride- groom (years)</i>	<i>Age of bride (years)</i>								<i>Total bride- grooms</i>
	<i>Under 15</i>	<i>15-19</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-44</i>	<i>45 and over</i>	
Under 20 . . .	4	7,296	1,380	57	8	1	..	..	8,746
20-24 . . .	6	23,279	34,825	2,502	267	39	11	5	60,934
25-29 . . .	..	3,691	14,441	5,600	881	191	40	16	24,860
30-34 . . .	..	453	2,534	2,535	1,099	403	108	58	7,190
35-39 . . .	..	80	571	920	830	488	226	142	3,257
40-44 . . .	..	22	179	384	454	479	413	386	2,317
45-49 . . .	..	6	78	171	249	359	394	729	1,986
50-54 . . .	..	7	35	64	101	163	260	832	1,462
55-59 . . .	..	2	9	21	44	59	136	894	1,165
60-64 . . .	..	1	2	5	16	33	52	770	879
65 and over . .	..	1	3	3	4	7	25	1,190	1,233
<b>Total brides</b>	<b>10</b>	<b>34,838</b>	<b>54,057</b>	<b>12,262</b>	<b>3,953</b>	<b>2,222</b>	<b>1,665</b>	<b>5,022</b>	<b>114,029</b>



The median age at marriage of brides and bridegrooms has declined during recent years. The median ages, in years, of brides for each of the five years to 1972 were: 1968, 21.50; 1969, 21.54; 1970, 21.46; 1971, 21.39 and 1972, 21.41. The median ages, in years, of bridegrooms were: 1968, 23.89; 1969, 23.78; 1970, 23.74; 1971, 23.78 and 1972, 23.80. The difference in the median age at marriage between brides and bridegrooms is generally about two years, the difference in 1972 being 2.39 years. The median age is the age at which half of the bridegrooms or brides were younger and half were older than that age. It gives a better indication of the most common age at marriage than the average age (mean).

### Countries of birth of persons marrying

#### RELATIVE COUNTRIES OF BIRTH OF BRIDEGROOMS AND BRIDES AUSTRALIA, 1972

Country of birth of bridegroom	Country of birth of bride										Total bridegrooms
	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Malta	Netherlands	Yugoslavia	Other European and unspecified	
Australia . . . . .	75,560	455	4,989	674	67	311	171	712	99	529	84,759
New Zealand . . . . .	1,011	142	116	14	..	5	3	21	4	11	1,366
United Kingdom and Ireland . . . . .	6,948	119	2,200	150	11	40	34	132	14	110	10,087
Germany . . . . .	1,288	10	179	157	4	16	15	20	21	81	1,870
Greece . . . . .	232	3	27	11	1,515	9	6	2	11	19	1,916
Italy . . . . .	1,311	4	134	37	13	1,621	27	19	39	65	3,374
Malta . . . . .	369	3	50	14	2	3	299	6	..	6	764
Netherlands . . . . .	1,124	9	138	31	1	8	14	167	5	20	1,574
Yugoslavia . . . . .	311	12	44	38	15	37	8	8	1,412	56	1,969
Other European and unspecified . . . . .	1,033	20	174	122	10	27	10	32	45	676	2,311
Total brides	91,038	812	8,294	1,309	1,705	2,113	603	1,165	1,667	1,661	114,029

### Celebration of marriages

Marriages may be celebrated by a minister of religion registered as an authorised celebrant, by a district registrar or by other suitable persons authorised by the Attorney-General. Notice of the intended marriage must be given to the celebrant at least seven days before the marriage. Most of the marriages are celebrated by ministers of religion. The registered ministers in 1972 belonged to more than fifty different religious denominations.

#### MARRIAGES BY AUTHORISED CELEBRANTS: STATES AND TERRITORIES, 1972

Category of authorised celebrant	Australia									Proportion of total
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	No.	
Registered ministers of recognised religious denominations—										
Roman Catholic . . . . .	11,541	9,222	4,362	2,193	2,395	721	112	429	30,975	25.4
Church of England . . . . .	12,142	6,645	3,768	2,052	2,589	1,332	59	351	28,938	27.2
Methodist . . . . .	4,441	2,984	2,418	2,460	962	412	57	58	13,792	12.1
Presbyterian . . . . .	3,489	4,541	2,084	348	452	161	22	122	11,219	9.8
Orthodox . . . . .	1,067	1,236	109	166	83	10	26	20	2,717	2.4
Baptist . . . . .	721	516	332	296	127	101	2	21	2,116	1.9
Lutheran . . . . .	181	284	460	603	47	6	7	13	1,601	1.4
Churches of Christ . . . . .	178	574	172	319	163	21	..	13	1,440	1.4
Congregational . . . . .	312	366	127	290	98	47	10	2	1,252	1.1
Salvation Army . . . . .	188	192	88	61	47	26	4	4	610	0.5
Other . . . . .	793	961	398	221	237	88	4	7	2,709	2.4
Other authorised celebrants—										
Ministers of religion . . . . .	213	180	51	59	30	..	3	3	539	0.5
Civil officers . . . . .	6,254	3,505	1,697	1,761	1,890	501	184	329	16,121	14.1
Grand Total . . . . .	41,520	31,206	16,066	10,829	9,120	3,426	490	1,372	114,029	100.0
Proportion of total (per cent)—										
Ministers of religion . . . . .	84.94	88.77	89.44	83.74	79.28	85.38	62.45	76.02	85.86	..
Civil officers . . . . .	15.06	11.23	10.56	16.26	20.72	14.62	37.55	23.98	14.14	..

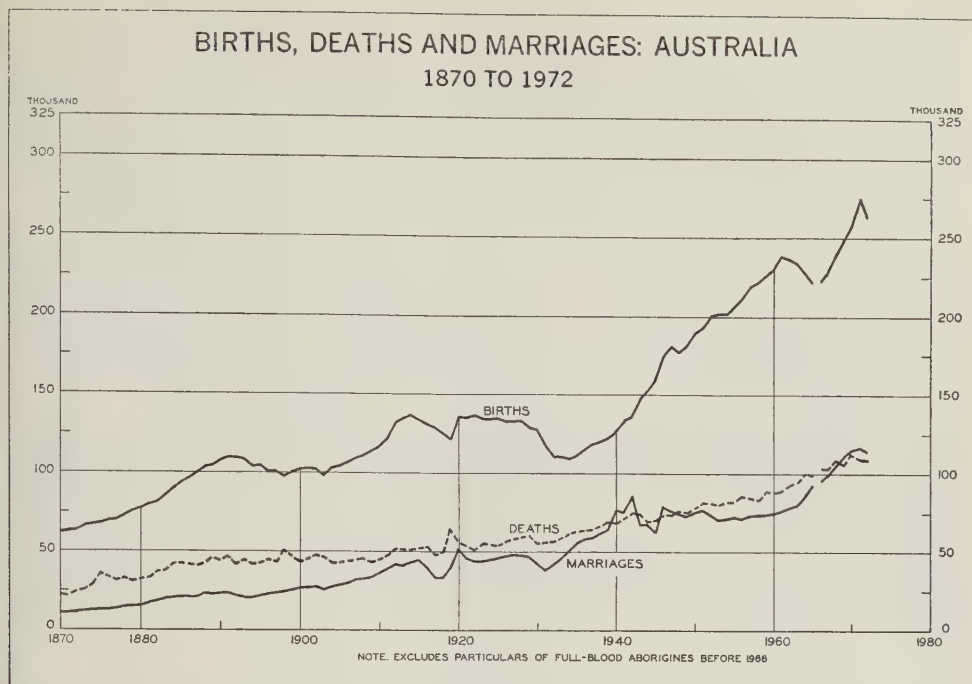


PLATE 19

**Divorce**

See the chapter Law, Order, and Public Safety.

**Births and fertility**

Information concerning a birth is required to be supplied to the registration authority within 28 days in the Australian Capital Territory and the Northern Territory, and 60 days in the States.

Information is required in all States and Territories concerning what have been commonly known as 'stillbirths'. These are excluded from all the tables of births and deaths in this chapter and are included only in the special tables on stillbirths shown on pages 175-6.

**Number of live births**

Plate 19, above compares the annual number of births, deaths and marriages. During the 1940s, 1950s and 1960s annual births increased rapidly as fertility rose following the low birthrates of the depression years. The fall from 1961 to 1966 resulted from a steep decline in fertility. Since 1966, numbers have been increasing again.

**LIVE BIRTHS(a): STATES AND TERRITORIES, 1946 TO 1972**

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Annual average—</b>									
1946-50 .	68,856	47,372	28,003	16,270	13,130	7,064	289	734	181,718
1951-55 .	73,737	53,770	30,983	18,045	15,724	7,774	468	922	201,423
1956-60 .	79,613	61,279	34,171	19,977	16,922	8,517	694	1,286	222,459
1961-65 .	82,896	65,193	35,357	21,377	16,861	8,439	897	1,932	232,952
1966-70 .	82,560	68,755	35,378	21,310	19,426	7,979	2,134	2,783	240,325
<b>Annual total—</b>									
1968 .	81,696	70,228	35,190	21,207	19,541	8,317	2,084	2,643	240,906
1969 .	86,036	71,035	36,576	21,977	20,754	8,445	2,274	3,079	250,176
1970 .	88,448	73,019	37,530	22,617	21,618	8,185	2,624	3,475	257,516
1971 .	98,466	75,498	39,970	22,996	24,239	8,321	2,832	4,040	276,362
1972 .	95,278	71,807	39,251	21,844	22,177	7,824	2,722	4,066	264,969

(a) Excludes particulars of full-blood Aborigines before 1966.

**Masculinity of live births**

There is a universal tendency for the number of male births to exceed female births usually by between 5 to 6 per cent. The masculinity of live births, is the number of males born for every 100 female births. When the number of births for which masculinity is being calculated is small (for example, totals for smaller States) considerable variation is shown. The following table shows the figures for Australia for each five year period from 1946 to 1970 and for each of the years 1968 to 1972.

**MASCUILITY(a) OF LIVE BIRTHS REGISTERED: AUSTRALIA, 1946 TO 1972**

	1946-50	1951-55	1956-60	1961-65	1966-70	1968	1969	1970	1971	1972
Total births	105.60	105.19	105.65	105.83	105.41	105.41	105.22	105.12	104.34	105.47
Ex-nuptial births	104.46	103.36	104.49	106.88	105.11	104.21	103.95	106.96	106.63	106.38

(a) Number of males born for every 100 female births. Excludes particulars of full-blood Aborigines before 1966.

**Crude birth rates**

The simplest method of measuring fertility is to relate the number of births to the mean population, which gives the crude birth rate. The crude birth rate measures the rate per thousand persons (irrespective of age or sex) at which the population has added to its numbers by way of births during a given period. Other methods of measuring fertility are shown on pages 168-70. The difference between the crude birth rate and the crude death rate is the rate of natural increase (the hatched area in plate 20, page 167). In the past 100 years the crude birth rate has shown a general downward trend. Since 1967 there has been a small upward movement, which is expected to continue for a few years, partly as a consequence of the increasing number of young women from the postwar baby boom who are now reaching maturity.

**CRUDE BIRTH RATES(a): STATES AND TERRITORIES, 1946 TO 1972**

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Average annual rates—</b>									
1946-50	22.60	22.51	24.69	24.41	25.24	26.71	23.77	37.92	23.39
1951-55	21.78	22.42	24.11	23.25	25.37	25.58	29.37	32.22	22.86
1956-60	21.55	22.52	23.80	22.27	24.20	25.45	31.49	30.10	22.59
1961-65	20.49	21.42	22.49	21.11	21.71	23.41	29.30	26.31	21.34
1966-70	18.87	20.63	20.41	18.94	21.14	21.00	31.49	24.60	19.95
<b>Annual rates—</b>									
1968	18.72	21.10	20.33	18.89	21.34	21.89	30.85	23.56	20.04
1969	19.35	20.96	20.73	19.28	21.72	21.93	31.09	25.31	20.38
1970	19.52	21.16	20.90	19.52	21.74	21.09	33.09	26.36	20.55
1971	21.35	21.51	21.84	19.55	23.50	21.27	32.69	28.00	21.62
1972	20.39	20.20	20.95	18.37	20.99	19.90	29.23	25.68	20.39

(a) Number of births per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1966.

The birth rates in the table above are based on *live births registered in the respective States and Territories*. Some confinements, however, take place in States other than the State in which the mother usually resides, particularly in areas near State borders. The variations thus caused in the birth rates for the States and Territories by *referring the birth registrations to the mother's usual residence* are shown by the following corrected rates for 1971—New South Wales, 21.41; Victoria, 21.48; Queensland, 21.77; South Australia, 19.46; Western Australia, 23.53; Tasmania, 21.34; Northern Territory, 33.68 and Australian Capital Territory, 27.48

The crude birth rates of Australia and the more populous countries of the world for the latest available year are shown in International Vital Statistics at the end of this chapter.

**Fertility rates**

Changes in the crude birth rate are in general indicative of changes in fertility. However they may result from changes in the proportion of women of childbearing age in the population. Changes in the proportion of such women who are married may also affect fertility and the crude birth rate.



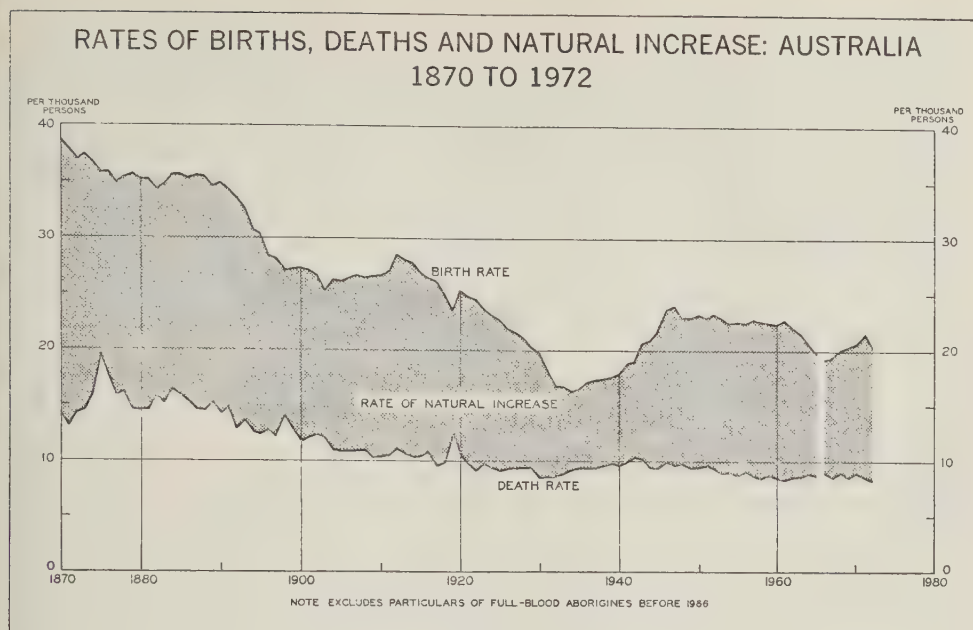


PLATE 20

The fertility rates in the following table are for the Census years 1881 to 1971. The births for the three years around the census are related to women of childbearing age as enumerated at each census. Although the childbearing age has been taken to be 15-44 years, births to younger and older women are included in the computations. Nuptial births are related to married women aged 15-44 years to give married fertility rates.

Although married fertility fell by 58 per cent between 1880-82 and 1970-72, total fertility and the crude birth rate fell by only 41 per cent. The effect of a decline in the fertility of married women on total fertility and the crude birth rate is partly offset by an increase in the proportion of such women in the population. In 1881 only 51 per cent of females aged 15-44 were married but in 1966, 68 per cent were married. Also during this time births to unmarried women increased from 14 to 29 per thousand for single, widowed and divorced females aged 15-44.

**CRUDE BIRTH RATES AND FERTILITY RATES: AUSTRALIA, 1880-82 TO 1970-72(a)**

Period	Average annual rates			Index Nos (Base: 1880-82 = 100)		
	Fertility rates			Fertility rates		
	Crude birth rate(b)	Births per 1,000 women aged 15-44 years	Nuptial births per 1,000 married women aged 15-44 years	Crude birth rate(b)	Births per 1,000 women aged 15-44 years	Nuptial births per 1,000 married women aged 15-44 years
1880-82 . . .	35.3	170	321	100	100	100
1890-92 . . .	34.5	159	332	98	94	103
1900-02 . . .	27.2	117	235	77	69	73
1910-12 . . .	27.2	117	236	77	69	74
1920-22 . . .	25.0	107	197	71	63	61
1932-34 . . .	16.7	71	131	47	42	41
1946-48 . . .	23.6	104	160	67	61	50
1953-55 . . .	22.7	109	149	64	64	46
1960-62 . . .	22.5	112	154	64	66	48
1965-67 . . .	19.5	95	132	55	56	41
1970-72 . . .	20.85	100	134	59	59	42

(a) Excludes particulars of full-blood Aborigines before 1965-67. (b) Number of births per 1,000 of mean population.

**Age-specific birth rates**

Fertility within the childbearing group varies considerably, as may be seen from the five-year age-specific rates in the following table. These rates were obtained by dividing births according to age of mother by the estimated number of women in the corresponding five-year age group.

Total fertility is obtained by summing single age specific rates or by summing five-year age-specific rates and multiplying by 5. This total, divided by 1000, represents the hypothetical number of children a woman would bear during her lifetime if she experienced the rates of the year shown.

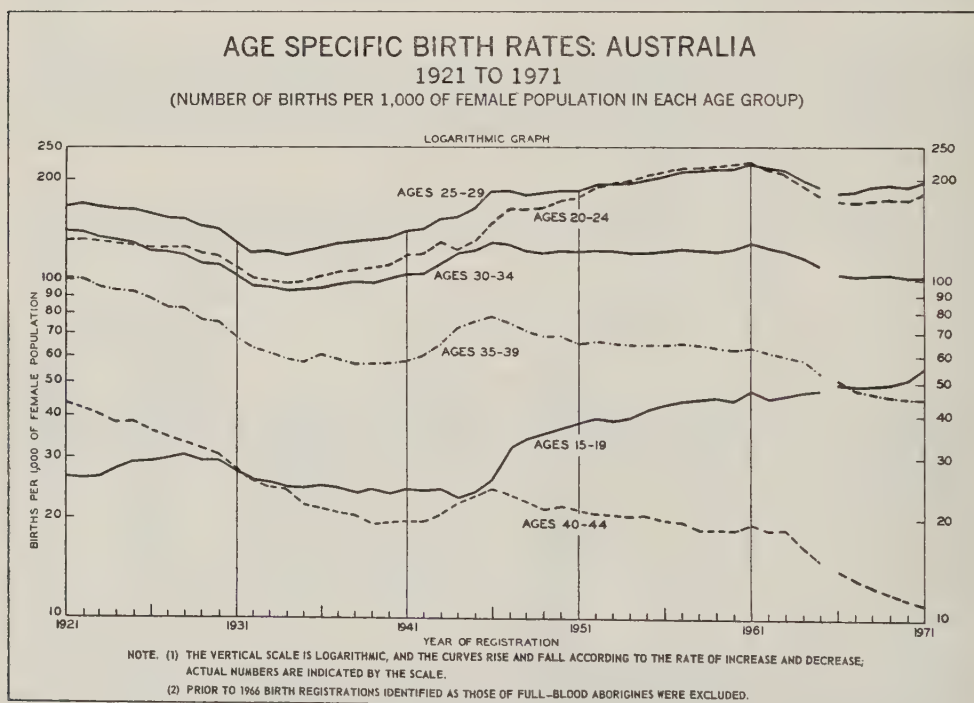
Since 1946, the fertility of younger women has increased, largely as a result of younger marriage, whereas fertility in the thirty and forty age groups has declined. Total fertility rose to a peak in 1961, of 3.4 children per woman, declined to 2.8 in 1967 and has been about 2.9 since.

**AGE-SPECIFIC BIRTH RATES(a): AUSTRALIA, 1946 TO 1971**

Period	Age group (years)							Total fertility
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
1946-50(b)	33.05	164.22	183.29	126.56	72.33	22.71	1.76	3.020
1951-55(b)	39.54	192.81	192.97	123.51	65.05	20.50	1.53	3.180
1956-60(b)	44.20	216.42	211.47	126.06	63.91	18.96	1.45	3.412
1961-65(b)	46.50	203.95	207.15	122.38	59.18	17.54	1.19	3.289
1966-70(b)	49.32	172.65	187.64	103.00	46.85	12.86	0.99	2.867
1967	48.43	170.64	184.78	102.49	47.72	13.49	1.09	2.843
1968	48.99	173.65	189.94	103.01	46.43	12.87	1.05	2.880
1969	49.16	173.88	190.99	103.13	45.19	12.10	1.01	2.877
1970	51.13	171.99	188.63	101.24	44.29	11.69	0.78	2.849
1971	55.17	180.92	195.39	102.26	44.90	11.42	0.78	2.954

(a) Number of births per 1,000 women in each age group. Excludes particulars of full-blood Aborigines before 1966.

(b) Average annual rates.



**Gross and net reproduction rates**

The gross reproduction rate is derived from total fertility and the ratio of female to total births. It indicates the number of female children who would be born on average to women supposing the rates from which it was calculated were to apply throughout the reproductive period. It is an indication of the extent to which the population is reproducing itself except that it does not allow for females who failed to survive to the end of the childbearing period. The net reproduction rate allows for such mortality. It is obtained by multiplying the age-specific rates by the survivor proportions in the corresponding age group of the stationary or life table population. Mortality in childhood and young adulthood is now so low that there is little difference between current gross and net reproduction rates.

**GROSS AND NET REPRODUCTION RATES(a): AUSTRALIA, 1947 TO 1971**

Year	Gross reproduction rate	Net reproduction rate	Year	Gross reproduction rate	Net reproduction rate
1947 . . . . .	1.494	(b)1.416	1968 . . . . .	1.402	(e)1.359
1954 . . . . .	1.559	(c)1.499	1969 . . . . .	1.402	(e)1.359
1961 . . . . .	1.728	(d)1.672	1970 . . . . .	1.389	(e)1.347
1966 . . . . .	1.400	(e)1.355	1971 . . . . .	1.441	(e)1.397
1967 . . . . .	1.385	(e)1.342			

(a) Excludes particulars of full-blood Aborigines before 1966. (b) 1946-1948 mortality experience used. (c) 1953-1955 mortality experience used. (d) 1960-1962 mortality experience used. (e) 1965-1967 mortality experience used.

In the following table a comparison is given of the gross and net reproduction rates recorded for various countries in the period 1966 to 1971. The registration of vital events has not been fully established in many countries and consequently details for the calculation of reproduction rates for those countries are not available.

**GROSS AND NET REPRODUCTION RATES: VARIOUS COUNTRIES**

(Source: *Population Index*, April-June 1972, Office of Population Research, Princeton University)

Country	Period	Reproduction rate		Country	Period	Reproduction rate	
		Gross	Net			Gross	Net
Panama . . . . .	1967	2.55	2.30	England and Wales . . . . .	1969	1.19	1.16
Mauritius . . . . .	1968	2.24	1.98	United States of America . . . . .	1968	1.20	1.16
Taiwan . . . . .	1970	1.94	1.84	Italy . . . . .	1967	1.19	1.14
Ireland . . . . .	1968	1.91	1.82	Yugoslavia . . . . .	1967	1.23	1.14
Israel . . . . .	1968	1.85	1.78	Canada . . . . .	1969	1.22	1.13
Romania . . . . .	1968	1.70	1.60	Germany, Dem. Rep. . . . .	1967	1.14	1.10
Chile . . . . .	1967	1.88	1.56	Belgium . . . . .	1968	1.12	1.09
Iceland . . . . .	1967	1.59	1.55	Greece . . . . .	1969	1.13	1.07
New Zealand . . . . .	1968	1.54	1.50	Japan . . . . .	1967	1.08	1.05
Australia . . . . .	1971	1.44	1.40	Germany, Fed. Rep. . . . .	1969	1.07	1.03
Scotland . . . . .	1968	1.35	1.30	Czechoslovakia . . . . .	1969	0.99	0.95
Netherlands . . . . .	1968	1.32	1.29	Denmark . . . . .	1969	0.97	0.95
Norway . . . . .	1969	1.31	1.28	Hungary . . . . .	1968	1.00	0.95
Portugal . . . . .	1967	1.39	1.25	Sweden . . . . .	1970	0.94	0.92
France . . . . .	1967	1.29	1.25	Finland . . . . .	1969	0.90	0.86
Austria . . . . .	1969	1.22	1.17				

**Fertility of marriages**

Estimates of the fertility of marriages may be made by relating nuptial births in each year to the marriages from which they could have resulted. Births to women of a certain number of years duration of marriage are related to the number of marriages taking place that number of years previously and the resulting rates are added to give a total for all durations, namely, the index of current marriage fertility.



The figure for a particular year gives the estimated number of children which a thousand marriages would produce according to the fertility conditions of that year.

Births are omitted from the calculation if the marriage did not take place in Australia. Births which occur overseas to Australian marriages cannot be included and hence some understatement is present.

The following table gives an analysis of the index, shown in the total column, according to duration of marriage, expressing the results as births per thousand marriages.

#### DURATION-SPECIFIC FERTILITY RATES(a): AUSTRALIA, 1959 TO 1971

Births occurring in—	Duration of marriage (years)										Total
	Under 1	1	2	3	4	Total under 5	5-9	10-14	15-19	20 and over	
1959 . . . . .	379	319	316	279	249	1,542	760	298	99	25	2,724
1960 . . . . .	382	322	317	288	249	1,558	772	302	100	25	2,757
1961 . . . . .	403	332	328	290	254	1,607	789	314	106	26	2,842
1962 . . . . .	389	318	324	290	247	1,568	781	308	101	22	2,780
1963 . . . . .	384	307	318	288	241	1,538	756	302	105	24	2,725
1964 . . . . .	368	288	296	275	231	1,458	712	283	99	21	2,573
1965 . . . . .	341	275	287	261	222	1,386	662	260	90	19	2,417
1967 . . . . .	308	251	273	268	222	1,322	648	239	80	18	2,307
1968 . . . . .	308	247	280	267	235	1,337	668	234	79	17	2,335
1969 . . . . .	290	246	279	270	231	1,316	688	233	75	17	2,329
1970 . . . . .	278	236	275	262	231	1,282	675	230	75	16	2,278
1971 . . . . .	282	240	279	270	235	1,306	694	231	75	15	2,321

(a) Number of births per thousand marriages. From 1966 includes births of Aborigines where parents were legally married and excludes births of tribal marriages.

The summation of duration-specific rates for a particular year without reference to changing patterns in age at marriage or age of parents contributes to the hypothetical nature of the index. It is more satisfactory, therefore, to express the rates in cohort form by following the experience of marriages of a particular year cumulated over successive durations of marriage.

Since the fertile period of a marriage has a duration of up to some thirty years, completed fertility can only be determined with certainty for marriages occurring before 1940. Fortunately, because of the concentration of births in the early years of marriage the ultimate level of fertility and the size of family can be assessed with a fair degree of precision by the end of the fifteenth year. The most recent cohort to reach this duration was that of 1956-57.

To determine the relevant marriage cohorts from which births can have derived, a system of quarterly weights is applied. Births in 1969 to marriages in their third year, for example, could have arisen from marriages in any one of the eight quarters of 1966 and 1967. Proportions of the marriages in each of these quarters, namely  $\frac{1}{8}$ ,  $\frac{3}{8}$ ,  $\frac{5}{8}$ ,  $\frac{7}{8}$ ,  $\frac{7}{8}$ ,  $\frac{5}{8}$ ,  $\frac{3}{8}$ , and  $\frac{1}{8}$  respectively, are summed to arrive at the total marriages in the 1966-67 cohort. This method is applied to all marriages of completed durations three or more years. The first two years of marriage are weighted on a monthly basis.

#### CUMULATED DURATION-SPECIFIC FERTILITY RATES, MARRIAGE COHORTS(a) AUSTRALIA, 1955 TO 1971

Marriages of year—	Completed duration of marriage (years)						
	1	2	3	4	5	10	15
1955-56 . . . . .	352	674	983	1,262	1,511	2,262	2,497
1956-57 . . . . .	367	685	1,001	1,289	1,543	2,262	2,495
1957-58 . . . . .	365	684	1,001	1,291	1,538	2,219	..
1958-59 . . . . .	379	701	1,029	1,319	1,560	2,216	..
1959-60 . . . . .	382	714	1,038	1,326	1,557	2,210	..
1960-61 . . . . .	403	721	1,039	1,314	1,536	2,194	..
1961-62 . . . . .	389	696	992	1,253	1,468	2,125	..
1962-63 . . . . .	384	672	959	1,219	1,441	..	..
1963-64 . . . . .	368	643	925	1,193	1,428	..	..
1964-65 . . . . .	341	599	872	1,139	1,370	..	..
1965-66 . . . . .	324	575	855	1,125	1,356	..	..
1966-67 . . . . .	308	555	834	1,096	1,331	..	..
1967-68 . . . . .	308	554	829	1,099	..	..	..
1968-69 . . . . .	290	526	805	..	..	..	..
1969-70 . . . . .	278	518	..	..	..	..	..
1970-71 . . . . .	282	..	..	..	..	..	..

(a) Cumulated number of births per thousand marriages. From 1966 includes births of Aborigines where parents were legally married and excludes births of tribal marriages.

A more detailed analysis of the figures in the above table and of earlier cohorts has been made by tabulating the number of births within each duration of marriage which were first, second, third or subsequent births to the marriages under consideration. Details then derived of relative family size at each duration of marriage have enabled the computation of duration-parity-specific fertility rates.

#### Ex-nuptial live births

A birth is registered as ex-nuptial if the parents were not married to one another at the time of the confinement. Births to tribally-married Aborigines are classified as nuptial. Ex-nuptial births have been increasing and in 1971 they comprised 9.27 per cent of all births. The variations in the proportions of ex-nuptial live births as between the individual States and Territories for 1971 and for Australia at intervals from 1946 to 1971 are shown in the following tables. The high ex-nuptial birth rate for the Northern Territory is due in part to difficulties in identifying births where parents were tribally married. It is suspected that a substantial number of ex-nuptial births for the Northern Territory are in fact births to women adhering to tribal marriage systems.

EX-NUPTIAL LIVE BIRTHS  
NUMBER AND PROPORTION, STATES AND TERRITORIES, 1971

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number	9,674	5,010	4,859	1,782	2,720	722	664	198	25,629
Proportion of total births %	9.82	6.64	12.16	7.75	11.22	8.68	23.45	4.90	9.27

EX-NUPTIAL LIVE BIRTHS: NUMBERS, PROPORTION AND RATES(a)  
AUSTRALIA, 1946 TO 1971

	Annual average									
	1946-50	1951-55	1956-60	1961-65	1966-70	1967	1968	1969	1970	1971
Number	7,349	7,999	10,027	13,798	18,937	17,734	19,171	19,585	21,367	25,629
Rates(b)	0.95	0.91	1.02	1.25	1.57	1.50	1.60	1.60	1.71	2.01
Proportion of total births %	4.04	3.97	4.51	5.92	7.88	7.73	7.96	7.83	8.30	9.27

(a) Excludes particulars of full-blood Aborigines before 1966. (b) Number of ex-nuptial births per 1,000 of mean population.

A further measure of ex-nuptiality is obtained by calculating the number of ex-nuptial births per thousand of the single, widowed and divorced female population aged from 15 to 44 years. On this basis, the number of ex-nuptial births per 1,000 unmarried women of ages 15 to 44 is as follows: 1946-48, 11.45; 1953-55, 14.45; 1960-62, 18.49; 1965-67, 20.96; and 1970-72, 28.59. Ex-nuptial births to married women, which are not recorded separately, are included in these figures and it is not possible to determine to what extent they influence the trend shown.

#### Legitimations

Under the provisions of the Commonwealth *Marriage Act* 1961-1966, which came into operation on 1 September 1963, a child whose parents were not married to each other at the time of its birth becomes legitimised on the subsequent marriage of its parents. The legitimisation takes place whether or not there was a legal impediment to the marriage of the parents at the time of the child's birth and whether or not the child was still living at the time of the marriage, or in the case of a child born before 1 September 1963, at that date. Prior to the introduction of this Act, legitimations took place under Acts passed in the several States to legitimise children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Acts, any child who came within the scope of their purposes, born before or after the passing thereof, was deemed to be legitimate from birth by the post-natal union of its parents and entitled to the status of offspring born in wedlock. The number of children legitimised in Australia during 1971 was 3,896.

#### Multiple births

Because the current Australian birth statistics are based only on those confinements which resulted in a live-born child, the number of confinements for multiple births for Australia is understated—firstly, because in cases where all children of a multiple birth are stillborn the confinement is excluded, and secondly, because some cases of multiple births in which only one child was live-born are registered as single births.

**Number of confinements**

The following table shows the number of single and multiple confinements and the number of live births. The table includes only those confinements resulting in at least one live birth.

**LIVE BIRTHS AND CONFINEMENTS: STATES AND TERRITORIES, 1971**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>LIVE BIRTHS</b>									
Single births .	96,436	73,923	39,222	22,535	23,827	8,156	2,792	3,947	270,838
Twins .	1,998	1,567	744	449	406	156	37	93	5,450
Triplets .	21	8	4	12	6	9	3	..	63
Other multiple .	11	..	..	..	..	..	..	..	11
Males .	50,271	38,432	20,365	11,797	12,498	4,205	1,478	2,068	141,114
Females .	48,195	37,066	19,605	11,199	11,741	4,116	1,354	1,972	135,248
<b>Total</b> .	<b>98,466</b>	<b>75,498</b>	<b>39,970</b>	<b>22,996</b>	<b>24,239</b>	<b>8,321</b>	<b>2,832</b>	<b>4,040</b>	<b>276,362</b>

**STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE**

Twins .	58	13	20	1	10	2	1	3	108
Triplets .	3	1	2	..	..	..	..	..	6
Other multiple .	2	..	..	..	..	..	..	..	2

**CONFINEMENTS RESULTING IN BIRTHS SHOWN ABOVE**

Nuptial .	87,887	69,753	34,785	20,993	21,343	7,525	2,154	3,798	248,238
Ex-nuptial .	9,587	4,963	4,821	1,771	2,694	713	658	197	25,404
<b>Total</b> .	<b>97,474</b>	<b>74,716</b>	<b>39,606</b>	<b>22,764</b>	<b>24,037</b>	<b>8,238</b>	<b>2,812</b>	<b>3,995</b>	<b>273,642</b>

NOTE. Owing to the registration procedure adopted in some States, it is possible that in some cases where one child only of a multiple pregnancy was liveborn, the confinement has been treated as a single birth. However, the numbers of multiple births are not significantly affected. See also page 174.

Multiple births recorded during 1971 comprised 2,779 cases of twins, 23 cases of triplets, and two cases of other multiple births the resulting number of live-born and stillborn children respectively 5,450 and 108 for twins, 63 and 6 for triplets, 11 and 2 for other multiple births. This represents an average of 10.16 recorded cases of twins and 0.08 recorded cases of triplets per 1,000 confinements or, alternatively, mothers of twins represented 1 in every 98 mothers and mothers of triplets 1 in every 11,900. Total cases of multiple births represented 10.25 per 1,000 confinements or 1 in every 98 mothers.

**Confinements—relative ages of parents**

The relative ages of the parents of children whose births were registered in 1971 have been tabulated separately for male and female births, multiple births being distinguished from single births. For confinements and for multiple births, the relative ages of parents are shown in *Demography*, Bulletin No. 86.

**CONFINEMENTS, BY RELATIVE AGES OF PARENTS: AUSTRALIA, 1971**

Age of father (years)	Age of mother (years)									Total
	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated	
Under 20 .	4	3,783	669	19	2	..	..	..	1	4,478
20-24 .	4	13,548	37,910	3,661	219	20	3	..	1	55,366
25-29 .	2	2,507	40,364	40,953	3,116	207	25	1	1	87,176
30-34 .	2	424	8,226	29,702	17,225	1,521	134	4	..	57,238
35-39 .	..	63	1,416	6,440	11,951	6,301	512	11	1	26,695
40-44 .	..	32	353	1,526	3,606	4,766	1,799	43	..	12,125
45-49 .	..	6	113	389	772	1,326	1,056	126	..	3,788
50-54 .	..	2	28	100	180	286	274	50	..	920
55-59 .	..	2	17	34	65	75	63	17	..	273
60-64 .	..	1	7	15	18	24	19	2	..	86
65 and over(a) .	..	1	16	21	24	13	9	4	5	93
<b>Total nuptial</b> .	<b>12</b>	<b>20,369</b>	<b>89,119</b>	<b>82,860</b>	<b>37,178</b>	<b>14,539</b>	<b>3,894</b>	<b>258</b>	<b>9</b>	<b>248,238</b>
<b>Total ex-nuptial</b> .	<b>144</b>	<b>9,807</b>	<b>8,488</b>	<b>3,685</b>	<b>1,904</b>	<b>966</b>	<b>354</b>	<b>40</b>	<b>16</b>	<b>25,404</b>
<b>Total</b> .	<b>156</b>	<b>30,176</b>	<b>97,607</b>	<b>86,545</b>	<b>39,082</b>	<b>15,505</b>	<b>4,248</b>	<b>298</b>	<b>25</b>	<b>273,642</b>

(a) Includes 54 confinements in which the age of the father was not stated.



**Confinements—relative countries of birth of parents**

The following table shows the relative countries of birth of parents of children whose births from nuptial confinements were registered during 1971.

**NUPTIAL CONFINEMENTS, BY RELATIVE COUNTRIES OF BIRTH OF PARENTS  
AUSTRALIA, 1971**

Country of birth of father	Country of birth of mother											Total fathers
	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Malta	Netherlands	Yugoslavia	Other European	Other and unspecified	
Australia . . . . .	158,910	937	8,495	1,513	117	455	411	1,476	113	846	1,705	174,978
New Zealand . . . . .	1,069	597	151	14	1	7	2	16	..	12	36	1,905
United Kingdom and Ireland . . . . .	10,590	219	9,852	231	18	75	96	204	23	192	519	22,019
Germany . . . . .	2,021	34	302	826	12	21	27	96	28	161	95	3,623
Greece . . . . .	461	7	40	22	7,405	18	12	12	30	28	182	8,217
Italy . . . . .	2,249	27	245	106	31	8,398	69	85	62	120	147	11,539
Malta . . . . .	652	3	116	19	5	10	1,694	17	4	15	27	2,562
Netherlands . . . . .	2,136	19	260	70	2	13	20	1,182	10	34	111	3,857
Yugoslavia . . . . .	716	13	102	143	70	121	12	42	4,151	137	55	5,562
Other European . . . . .	1,845	47	343	335	55	52	23	78	75	2,127	227	5,207
Other and unspecified . . . . .	2,436	83	438	115	168	69	31	79	15	158	5,177	8,769
Total mothers	183,085	1,986	20,344	3,394	7,884	9,239	2,397	3,287	4,511	3,830	8,281	248,238

**Confinements—age, duration of marriage and issue of mothers**

The total number of nuptial confinements resulting in live births in 1971 was 248,238, comprising 245,666 single births, 2,550 cases of twins, 20 cases of triplets, two cases of other multiple births. The following tables relating to previous issue exclude the issue of former marriages and stillborn children. On the other hand, they include in some States children by the same father who were born to the mother prior to the marriage. Children born at the present confinement are included in the calculation of average issue shown.

The following table shows that in 1971 the average size of family increased fairly regularly with the duration of the marriage. However, the average issue relates only to those women who gave birth in 1971. The table should not be interpreted to mean that, for example, *all* women who have been married for over ten years have an average of more than four children or those married twenty years, six children. The average issue of all married mothers who bore children in 1971 was 2.22 compared with 2.27 in 1970, 2.30 in 1969, 2.34 in 1968, and 2.38 in 1967.

**NUPTIAL CONFINEMENTS BY DURATION OF MARRIAGE, AND AVERAGE ISSUE OF  
MOTHERS: AUSTRALIA, 1971**

<i>Duration of marriage</i>	<i>Total nuptial confinements</i>	<i>Average issue of mother</i>	<i>Duration of marriage</i>	<i>Total nuptial confinements</i>	<i>Average issue of mother</i>
Under 1 year . . . . .	33,986	1.03	15 years . . . . .	2,152	4.89
1 year . . . . .	29,279	1.24	16 " . . . . .	1,688	5.07
2 years . . . . .	32,669	1.54	17 " . . . . .	1,358	5.24
3 " . . . . .	29,756	1.82	18 " . . . . .	1,042	5.65
4 " . . . . .	25,109	2.09	19 " . . . . .	747	5.87
5 " . . . . .	21,135	2.38	20 " . . . . .	585	6.20
6 " . . . . .	16,582	2.66	21 " . . . . .	417	6.50
7 " . . . . .	12,436	2.98	22 " . . . . .	218	6.83
8 " . . . . .	9,778	3.24	23 " . . . . .	207	6.48
9 " . . . . .	7,653	3.50	24 " . . . . .	91	6.96
10 " . . . . .	6,209	3.72	25 years and over . . . . .	102	7.99
11 " . . . . .	4,947	4.02	Not stated . . . . .	483	3.94
12 " . . . . .	3,926	4.14			
13 " . . . . .	3,110	4.42			
14 " . . . . .	2,573	4.63			
			<b>Total . . . . .</b>	<b>248,238</b>	<b>2.22</b>

**NUPTIAL CONFINEMENTS, BY AGE OF MOTHER AND PREVIOUS ISSUE  
AUSTRALIA, 1971**

Previous issue	Age of mother (years)							45 and over	Not stated	Total married mothers
	Under 20	20-24	25-29	30-34	35-39	40-44				
0 . . . . .	16,914	47,412	23,815	5,242	1,609	394	28	4	95,418	
1 . . . . .	3,195	30,321	30,018	8,664	2,121	409	21	3	74,752	
2 . . . . .	259	8,959	18,698	10,353	3,036	600	30	3	41,938	
3 . . . . .	12	1,968	7,076	6,895	2,821	650	22	..	19,444	
4 . . . . .	..	375	2,155	3,278	2,002	517	38	..	8,365	
5 . . . . .	..	69	750	1,512	1,241	412	31	..	4,015	
6 . . . . .	1	14	245	704	698	299	25	..	1,986	
7 . . . . .	..	1	75	285	459	204	18	..	1,042	
8 . . . . .	..	..	22	143	262	142	14	..	583	
9 . . . . .	..	..	4	53	144	100	9	..	310	
10 and over . . . . .	..	..	2	49	146	167	21	..	385	
Total married mothers . . . . .	20,381	89,119	82,860	37,178	14,539	3,894	257	10	248,238	

**Multiple births—previous issue of mothers**

Of married mothers of twins in 1971, 803 had no previous issue either living or dead, 805 had one child previously, 468 had two previous issue, 241 three, 110 four, 62 five, 28 six, 13 seven, 9 eight, 5 nine, 1 ten, 2 eleven, 2 twelve and 1 fifteen. Of the 20 cases of nuptial triplets, and two cases of other multiple births registered during 1971, 5 mothers had no previous issue, 6 had one, 6 had two, 4 had three and 1 had four previous issue.

**Nuptial first births**

A nuptial first birth is defined as the first birth to the existing marriage. About two-thirds of first births occur to women aged under 25, and over half occur within the first two years of marriage, (in 1971, 35 per cent in the first and 24 per cent in the second year).

The following table shows the number of nuptial first births classified by grouped ages of mothers and grouped durations of marriage of mothers.

**NUPTIAL FIRST BIRTHS, BY AGE OF MOTHER AND DURATION OF MARRIAGE  
AUSTRALIA, 1971**

		Age of mother (years)								
Duration of marriage		Under 20	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated	Total
Under 8 months	.	12,418	9,067	1,348	396	139	47	1	..	23,416
8 months	.	354	894	295	103	32	7	..	..	1,685
9 "	.	517	1,692	515	184	66	9	2	..	2,985
10 "	.	511	1,530	461	160	47	12	..	1	2,722
11 "	.	396	1,517	435	121	41	10	..	..	2,520
Total under 1 year		14,196	14,700	3,054	964	325	85	3	1	33,328
1 year and under	2 years	2,234	14,643	4,505	1,130	351	80	6	1	22,950
2 years	" "	387	10,423	4,666	718	222	48	8	1	16,473
3 "	" "	41	5,087	4,149	530	125	42	3	..	9,977
4 "	" "	6	1,788	3,330	384	91	21	..	1	5,621
5 "	" "	2	746	4,024	1,165	218	57	4	..	6,216
10 "	" "	..	1	81	327	165	22	1	..	597
15 years and over	" "	..	..	..	23	108	36	3	..	170
Not stated	" "	48	24	6	1	4	3	..	..	86
Total		16,914	47,412	23,815	5,242	1,609	394	28	4	95,418

The following table provides a comparison between the numbers of nuptial first births and subsequent births in periods since 1946 and shows also the proportion of first to total nuptial confinements.

**NUPTIAL FIRST BIRTHS AND SUBSEQUENT BIRTHS(a)  
AUSTRALIA, 1946 TO 1971**

Period	Nuptial confinements			Total	Proportion of first to total nuptial confinements (per cent)
	First births	Other births			
Annual average—					
1946-50 . . .	63,413	109,044	172,457	36.77	
1951-55 . . .	63,062	128,176	191,238	32.98	
1956-60 . . .	65,695	144,352	210,047	31.28	
1961-65 . . .	69,280	147,549	216,829	31.95	
1966-70 . . .	81,103	138,000	219,103	37.02	
Annual total—					
1967 . . .	76,127	133,302	209,429	36.35	
1968 . . .	81,341	138,124	219,465	37.06	
1969 . . .	85,650	142,539	228,189	37.53	
1970 . . .	88,412	145,227	233,639	37.84	
1971 . . .	95,418	152,820	248,238	38.44	

(a) Excludes particulars of full-blood Aborigines before 1966.

### Stillbirths

Comparison of the figures and rates in the following tables are affected by the differences in the definitions adopted by the various States in earlier years. Beginning in 1964, steps were taken to amend the States' registration laws and so make uniform the criteria whereby stillbirths are registered. The amended legislation provides for all foetal deaths of at least twenty weeks' gestation (or 400 grammes weight) to be registered. The dates on which the legislation came into effect for each State are as follows: New South Wales, January 1969; Victoria, May 1971; Queensland, October 1967; South Australia, January 1968; Western Australia, January 1968; Tasmania, March 1967; Northern Territory, September 1964; Australian Capital Territory, September 1969. Prior to these dates the statistics of stillbirths shown relate to those in several States of at least seven months gestation and in other States to those of at least twenty-eight weeks gestation. So as to preserve as much comparability as possible with figures for earlier years the figures shown for each State since the amended legislation relate to stillbirths of at least twenty-eight weeks gestation.

**STILLBIRTHS(a): STATES AND TERRITORIES, 1946 TO 1971**

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1946-50 . . .	1,405	949	626	368	274	161	n.a.	12	(b)3,795
1951-55 . . .	1,239	849	581	290	271	139	8	16	3,393
1956-60 . . .	1,253	839	558	274	235	109	6	19	3,293
1961-65 . . .	1,104	794	468	264	194	87	17	18	2,946
1966-70 . . .	876	767	361	215	192	86	(c)39	27	2,563
Annual total—									
1967 . . .	863	797	372	211	188	83	(c)49	24	2,587
1968 . . .	806	734	318	217	183	79	(c)39	26	2,402
1969 . . .	857	761	295	208	203	79	(c)35	26	2,464
1970 . . .	888	782	312	200	211	80	(c)30	29	2,532
1971 . . .	893	760	329	199	206	67	(c)24	41	2,519

(a) Excludes particulars of full-blood Aborigines before 1966. (b) Excludes Northern Territory. (c) Figures from 1966 include foetal deaths occurring in remote localities for which the period of gestation was not known. The numbers of such cases were: 1967, 25; 1968, 13; 1969, 13; 1970, 14; 1971, 3. The Registration Ordinance requires registration of any foetal death of at least twenty weeks gestation.



## PROPORTION OF STILLBIRTHS(a): STATES AND TERRITORIES, 1946 TO 1971

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average annual rate—									
1946-50 . . . . .	20.0	19.6	21.9	22.1	20.5	22.3	n.a.	16.3	(b)20.5
1951-55 . . . . .	16.5	15.5	18.4	15.8	17.0	17.5	17.2	17.1	16.6
1956-60 . . . . .	15.5	13.5	16.1	13.5	13.7	12.6	8.6	14.3	14.6
1961-65 . . . . .	13.1	12.0	13.1	12.2	11.4	10.2	18.4	9.3	12.5
1966-70 . . . . .	10.5	11.0	10.1	10.0	9.8	10.7	18.3	9.7	10.6
Annual rate—									
1967 . . . . .	10.8	12.0	10.6	10.2	10.3	10.9	24.9	9.9	11.2
1968 . . . . .	9.8	10.3	9.0	10.1	9.3	9.4	18.4	9.7	9.9
1969 . . . . .	9.9	10.6	8.0	9.4	9.7	9.3	15.2	8.4	9.8
1970 . . . . .	9.9	10.6	8.2	8.8	9.7	9.7	11.3	8.3	9.7
1971 . . . . .	9.0	10.0	8.2	8.6	8.4	8.0	8.4	10.0	9.0

(a) Number of stillbirths per 1,000 of all births (live and still). Excludes particulars of full-blood Aborigines before 1966. (b) Excludes Northern Territory.

NOTE. Because of the smallness of the numbers of stillbirths occurring in the Australian Capital Territory and the Northern Territory the rates for these Territories are subject to considerable fluctuation.

## Mortality

This section contains statistics of general mortality and infant mortality. Statistics of foetal deaths (stillbirths) are shown separately in the preceding section. For the registration of a death the period allowed is 8 days in Tasmania, 14 days in South Australia, Western Australia, Australian Capital Territory, and Northern Territory, 21 days in Victoria, and 30 days in New South Wales and Queensland.

## Number of deaths

The following table shows the number of deaths registered in each State and Territory for years commencing 1946. Stillbirths, although registered as both births and deaths in some States are excluded from the death statistics.

## DEATHS(a): STATES AND TERRITORIES, 1946 TO 1972

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1946-50(b) . . . . .	29,552	21,827	10,357	6,507	4,802	2,459	76	103	75,683
1951-55 . . . . .	32,135	22,900	11,187	7,182	5,263	2,576	109	131	81,483
1956-60 . . . . .	34,002	24,254	12,008	7,732	5,523	2,668	117	184	86,488
1961-65 . . . . .	37,514	26,569	13,570	8,388	6,043	2,939	152	290	95,465
1966-70 . . . . .	41,249	29,265	15,711	9,562	7,208	3,231	540	497	107,263
Annual total—									
1968 . . . . .	41,803	29,967	16,078	9,916	7,468	3,284	543	488	109,547
1969 . . . . .	40,665	28,976	15,786	9,337	7,350	3,309	485	588	106,496
1970 . . . . .	43,601	30,333	17,055	10,138	7,543	3,174	608	594	113,048
1971 . . . . .	41,691	30,598	16,339	9,686	7,806	3,295	637	598	110,650
1972—									
Males . . . . .	23,044	16,215	9,526	5,477	4,317	1,793	351	393	61,116
Females . . . . .	18,608	13,641	7,072	4,287	3,124	1,434	202	276	48,644
Persons . . . . .	41,652	29,856	16,598	9,764	7,441	3,227	553	669	109,760

(a) Excludes particulars of full-blood Aborigines before 1966. (b) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September 1939 to June 1947.

NOTE. Annual averages for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 597.

### Crude death rates

The simplest method of measuring mortality is to relate the number of deaths for a given period to the mean population for that period, which gives the crude death rate. This rate for a given period measures the number per thousand of population by which the population is depleted through deaths during that period.

#### CRUDE DEATH RATES(a): STATES AND TERRITORIES, 1946 TO 1972

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Average annual rate—									
1946–50(b)	9.70	10.37	9.13	9.76	9.23	9.30	6.27	5.31	9.74
1951–55	9.49	9.55	8.71	9.25	8.49	8.48	6.86	4.58	9.25
1956–60	9.20	8.91	8.36	8.62	7.90	7.97	5.32	4.31	8.78
1961–65	9.27	8.73	8.63	8.28	7.78	8.15	4.95	3.94	8.75
1966–70	9.43	8.78	9.07	8.50	7.84	8.50	7.97	4.40	8.90
Annual rate—									
1968	9.58	9.00	9.29	8.83	8.15	8.64	8.04	4.35	9.11
1969	9.15	8.55	8.95	8.19	7.69	8.59	6.63	4.83	8.68
1970	9.62	8.79	9.50	8.75	7.59	8.18	7.67	4.51	9.02
1971	9.04	8.72	8.93	8.23	7.57	8.42	7.35	4.15	8.66
1972—									
Males	9.84	9.13	10.09	9.23	7.98	9.08	6.78	4.84	9.36
Females	7.98	7.66	7.62	7.19	6.06	7.33	4.89	3.58	7.52
Persons	8.91	8.40	8.86	8.21	7.04	8.21	5.94	4.23	8.45

(a) Number of deaths per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1966.  
 (b) Excludes deaths of defence personnel, etc., from September 1939 to June 1947.

A graph showing the crude death rate for each year from 1870 to 1972 is shown on plate 20 page 167.

The crude death rate is affected by the particular sex and age composition of the population. While it is an element in the rate of natural increase of the population it cannot validly be used to compare the relative incidence of mortality in different populations. The crude death rate will tend to be low if the community contains a large proportion of young people and high if the population is elderly. Age specific death rates and true death rates are a guide to comparative mortality.

### True death rates

A composite measure of mortality unaffected by the age structure of the population can be obtained from life tables. The basic life table functions include expectation of life remaining at each year of age. The reciprocal of the expectation of life at birth is known as the true death rate, since, if the expectation of life of a person at birth is say, fifty years, then each person will on the average die fifty years after birth, so that in a stationary population one person in fifty or twenty per thousand, will die each year. The true death rate for a given period is unaffected by the particular age distribution of that period and is determined solely by the mortality experience of the period as manifested in the rate of mortality from each year of age to the next. The next table sets out true death rates for the periods covered by Australian life tables.

**TRUE DEATH RATES: AUSTRALIA  
1946-48 TO 1971(a)**

Period	True death rate	
	Males(b)	Females(c)
1946-48 . . .	15.14	14.16
1953-55 . . .	14.89	13.75
1960-62 . . .	14.72	13.48
1965-67 . . .	14.79	13.49
1968 . . . .	14.82	13.48
1969 . . . .	14.81	13.40
1970 . . . .	14.84	13.49
1971 . . . .	14.72	13.42

(a) Excludes particulars of full-blood Aborigines before 1965-67. (b) Number of deaths per 1,000 males in stationary population. (c) Number of deaths per 1,000 females in stationary population.

The crude death rates and the true death rates of Australia and the more populous countries of the world for the latest available year are shown in the table in International Vital Statistics at the end of this chapter.

#### Australian Life Tables

It has been the practice at each census from 1911 onwards to prepare complete life tables representative of the mortality experience of Australia. The mortality of the Australian population for the thirty years from 1881 to 1910 inclusive was investigated in 1911 by the Commonwealth Statistician. Tables were compiled for each State and for Australia as a whole in respect of each sex for each of the decennial periods 1881-90, 1891-1900 and 1901-10. These compilations furnished a comprehensive view of Australian mortality in respect of sex, time, and geographical distribution, and practically superseded all life tables prepared in Australia prior to 1911. For subsequent censuses the official life tables have been prepared only for Australia as a whole. They have been based upon recorded census population and the deaths of the three years around the census. The 1965-67 life tables included particulars of Aborigines for the first time. The 1920-22 life tables were prepared by the Commonwealth Statistician, those of 1932-34, 1946-48, 1953-55, 1960-62 and 1965-67 by the Commonwealth Actuary. Full particulars of the data used and the methods of construction are to be found in the reports of the Commonwealth Actuary.

#### COMPLETE EXPECTATION OF LIFE ( $e_x^0$ ) AT SELECTED AGES

Age (x)	Males				Females			
	1901-10	1953-55	1960-62	1965-67(a)	1901-10	1953-55	1960-62	1965-67(a)
0 . . .	55.20	67.14	67.92	67.63	58.84	72.75	74.18	74.15
10 . . .	53.53	59.53	59.93	59.50	56.38	64.78	65.92	65.75
20 . . .	44.74	50.10	50.40	49.98	47.52	55.06	56.16	56.00
30 . . .	36.52	40.90	41.12	40.72	39.33	45.43	46.49	46.34
40 . . .	28.56	31.65	31.84	31.44	31.47	35.99	36.99	36.85
50 . . .	21.16	22.92	23.13	22.76	23.69	27.03	27.92	27.83
60 . . .	14.35	15.47	15.60	15.27	16.20	18.78	19.51	19.52
70 . . .	8.67	9.59	9.77	9.52	9.96	11.62	12.19	12.23
80 . . .	4.96	5.47	5.57	5.51	5.73	6.30	6.68	6.72

(a) Includes particulars of full-blood Aborigines.

NOTE.  $e_x^0$  = complete expectation of life at specified ages.

The progress towards lower mortality rates evident over the past sixty years or more, did not continue in the 1960's. Expectation of life at birth was slightly less in 1965-67 than in 1960-62 for both males and females. The detailed 1965-67 life tables show that lower mortality rates were experienced only at ages 0-14, 28 to 32 and over 88 for males and at ages 0-13 and over 72 for females.



## Age distribution at death

Age at death is recorded for statistical purposes in days for the first week of life, in weeks for the first four weeks, in months for the first year and in completed years of life thereafter. These ages are usually combined in groups for publication, the most common being weeks for the first four weeks, months or groups of months for the first year, single years of age for the first five years, and thereafter the five-year groups 5-9 years, 10-14 years, etc. A summary in this form for the year 1971 is given for Australia in the following table.

## DEATHS, BY AGE AT DEATH AND SEX: AUSTRALIA, 1971

Age at death	Males	Fe- males	Per- sons	Age at death	Males	Fe- males	Per- sons
Under 1 week . . . . .	1,710	1,318	3,028	5-9 years . . . . .	292	189	481
1 week and under 2 weeks . . . . .	90	87	177	10-14 " . . . . .	287	132	419
2 weeks and under 3 weeks . . . . .	41	44	85	15-19 " . . . . .	907	374	1,281
3 weeks and under 4 weeks . . . . .	43	31	74	20-24 " . . . . .	1,070	353	1,423
<i>Total under 4 weeks . . . . .</i>	<i>1,884</i>	<i>1,480</i>	<i>3,364</i>	25-29 " . . . . .	705	302	1,007
4 weeks and under 3 months . . . . .	287	201	488	30-34 " . . . . .	653	368	1,021
3 months and under 6 months . . . . .	279	215	494	35-39 " . . . . .	883	491	1,374
6 months and under 12 months . . . . .	234	197	431	40-44 " . . . . .	1,376	860	2,236
<i>Total under 1 year . . . . .</i>	<i>2,684</i>	<i>2,093</i>	<i>4,777</i>	45-49 " . . . . .	2,423	1,439	3,862
1 year . . . . .	183	175	358	50-54 " . . . . .	3,320	1,825	5,145
2 years . . . . .	108	87	195	55-59 " . . . . .	5,052	2,566	7,618
3 " . . . . .	90	65	155	60-64 " . . . . .	6,431	3,353	9,784
4 " . . . . .	86	48	134	65-69 " . . . . .	7,676	4,218	11,894
<i>Total under 5 years . . . . .</i>	<i>3,151</i>	<i>2,468</i>	<i>5,619</i>	70-74 " . . . . .	7,940	6,063	14,003
				75-79 " . . . . .	7,603	7,751	15,354
				80-84 " . . . . .	6,322	7,892	14,214
				85 years and over . . . . .	4,971	8,930	13,901
				Age not stated . . . . .	12	2	14
				<b>Total all ages . . . . .</b>	<b>61,074</b>	<b>49,576</b>	<b>110,650</b>

There are different mortality rates at various stages of life, and the actual number of deaths in any period is related to the numbers living at the respective stages. Changes in the number of deaths from one period to another are associated with changes in the rate of mortality in the various age groups and by the changed proportions of persons living in the different groups. The combined effect of various influences, i.e. the decline in the rate of mortality, the long term decline in the birthrate, and the effects of past and present migration on the age distribution of the population, is shown in the following table, which shows the proportion of deaths in various age groups in five-year periods from 1946 to 1970 and for the year 1971.

PROPORTION OF DEATHS IN EACH AGE GROUP: AUSTRALIA, 1946 TO 1971(a)  
(Per cent)

Age at death (years)						1971		
	1946-50	1951-55	1956-60	1961-65	1966-70	Males	Females	Persons
Under 1 year . . . . .	6.48	5.77	5.41	4.74	4.06	4.39	4.22	4.31
1-4 years . . . . .	1.46	1.48	1.19	0.96	0.81	0.76	0.76	0.76
5-19 " . . . . .	1.89	1.85	1.76	1.76	1.83	2.43	1.40	1.97
20-39 " . . . . .	5.69	5.18	4.64	4.26	4.12	5.42	3.05	4.36
40-59 " . . . . .	18.72	17.54	17.02	17.28	17.37	19.93	13.49	17.05
60-64 " . . . . .	9.61	9.63	8.75	8.74	8.87	10.53	6.76	8.84
65 and over . . . . .	56.12	58.52	61.20	62.24	62.92	56.51	70.31	62.69
Age not stated . . . . .	0.03	0.03	0.03	0.02	0.02	0.03	0.01	0.02
<b>Total . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

(a) Excludes particulars of full-blood Aborigines before 1966.

A table showing these proportions for males and females separately for the period 1901 to 1950 was published in Year Book No. 39, page 614.

## Age-specific death rates

In previous issues of the Year Book, average annual age-specific death rates, i.e. the average number of deaths per 1,000 of population in each age group, were given for each State and Australia for the periods 1932-1934, 1946-1948, 1953-1955, 1960-1962 and 1965-1967 (see Year Books, No. 37, pp. 778-9, No. 39, pp. 615-6, No. 44, pp. 640-1, No. 52, p. 253, and No. 55, p. 189). These rates were based on the age distribution of the population at the relevant censuses.

## AGE-SPECIFIC DEATH RATES(a): STATES, 1971

Age group (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(b)
MALES							
Under 1(c)	19.43	15.59	20.82	17.29	21.20	17.36	19.02
1-4	0.94	0.76	1.00	0.93	1.15	1.00	0.94
5-9	0.43	0.49	0.52	0.36	0.55	0.63	0.47
10-14	0.51	0.35	0.59	0.32	0.51	0.47	0.46
15-19	1.54	1.41	1.92	1.55	1.22	2.57	1.58
20-24	1.81	1.95	2.09	1.54	1.84	2.51	1.88
25-29	1.55	1.22	1.74	1.01	1.69	1.78	1.47
30-34	1.50	1.51	1.92	1.55	1.72	1.59	1.59
35-39	2.33	2.08	2.77	2.17	2.43	2.22	2.34
40-44	3.43	3.21	4.13	2.76	3.15	3.65	3.37
45-49	6.29	6.48	6.09	5.04	5.16	6.18	6.12
50-54	10.41	10.24	10.50	8.20	8.29	10.54	10.02
55-59	17.48	16.71	17.16	15.78	15.03	15.82	16.81
60-64	27.58	26.57	26.49	23.23	25.34	24.95	26.44
65-69	43.34	44.63	37.20	39.23	40.90	39.27	41.98
70-74	66.29	65.77	58.06	65.45	63.92	67.17	164.76
75-79	102.07	105.72	91.92	93.79	101.99	93.10	100.60
80-84	144.65	157.13	142.20	143.76	161.27	132.15	147.97
85 and over	235.09	263.68	216.91	240.71	245.75	232.31	240.49
FEMALES							
Under 1(c)	15.21	13.71	17.44	14.47	16.95	9.96	15.48
1-4	0.72	0.64	1.00	0.62	1.09	0.33	0.79
5-9	0.33	0.30	0.26	0.33	0.42	0.41	0.32
10-14	0.23	0.25	0.18	0.16	0.20	0.35	0.22
15-19	0.66	0.61	0.70	0.79	0.76	0.78	0.68
20-24	0.56	0.66	0.88	0.73	0.60	0.70	0.65
25-29	0.69	0.59	0.91	0.69	0.39	0.78	0.67
30-34	0.97	0.81	1.14	1.02	0.87	0.70	0.95
35-39	1.57	1.15	1.43	1.15	1.39	1.25	1.38
40-44	2.50	2.08	2.67	1.87	1.64	1.28	2.26
45-49	3.96	3.73	4.13	2.70	3.64	3.65	3.79
50-54	5.86	5.15	6.04	4.94	4.84	5.78	5.54
55-59	9.46	7.64	8.73	6.72	8.36	7.81	8.47
60-64	13.74	13.17	12.63	11.25	11.20	13.43	13.04
65-69	21.80	21.11	18.66	20.02	20.74	21.77	20.50
70-74	38.68	37.48	30.92	35.22	35.69	38.07	36.65
75-79	65.27	64.58	57.07	55.22	59.51	67.60	62.62
80-84	107.79	105.33	98.22	95.33	93.57	112.35	103.65
85 and over	193.82	201.02	197.82	193.28	196.22	217.46	197.22

(a) Number of deaths per 1,000 of population in each age group at the Census of 30 June 1971. (b) Includes the Australian Capital Territory and the Northern Territory. (c) Infant deaths per 1,000 live births registered.

## AGE-SPECIFIC DEATH RATES(a): AUSTRALIA, 1946 TO 1971(b)

Age group (years)	1946-48 (c)	1953-55 (c)	1960-62 (c)	1965-67 (c)	1967	1968	1969	1970	1971
MALES									
Under 1(d)	31.71	25.18	22.36	20.85	20.57	19.83	20.14	20.60	19.02
1-4	2.09	1.69	1.15	1.08	0.97	0.95	0.95	1.07	0.94
5-9	0.92	0.67	0.52	0.45	0.44	0.47	0.48	0.47	0.47
10-14	0.77	0.63	0.48	0.46	0.42	0.50	0.48	0.40	0.46
15-19	1.41	1.51	1.23	1.33	1.30	1.46	1.33	1.52	1.58
20-24	1.73	1.82	1.62	1.67	1.69	1.79	1.70	1.88	1.88
25-29	1.69	1.68	1.49	1.48	1.53	1.42	1.48	1.43	1.47
30-34	2.02	1.79	1.69	1.64	1.64	1.59	1.65	1.56	1.59
35-39	2.66	2.40	2.26	2.45	2.31	2.36	2.35	2.37	2.34
40-44	4.12	3.64	3.67	3.82	3.90	3.74	3.75	3.65	3.37
45-49	6.86	6.01	5.96	6.14	6.29	6.13	6.43	6.19	6.12
50-54	11.39	10.44	10.01	10.45	10.10	10.61	10.31	10.60	10.02
55-59	17.58	17.03	16.57	16.96	17.21	17.41	17.08	17.39	16.81
60-64	27.43	26.58	26.44	27.59	27.28	28.73	27.33	27.94	26.44
65-69	42.42	41.28	41.68	43.66	43.69	44.20	43.69	45.52	41.98
70-74	63.69	64.53	63.04	66.84	65.98	68.20	65.18	67.67	64.76
75-79	99.65	98.77	94.43	99.77	97.86	104.40	101.97	107.13	100.60
80-84	149.31	145.88	141.83	146.95	144.00	157.39	139.85	153.27	147.97
85 and over	253.48	248.14	243.69	241.98	230.06	266.49	239.80	244.46	240.49
FEMALES									
Under 1(d)	24.96	19.88	17.57	16.35	15.82	15.61	15.57	15.02	15.48
1-4	1.72	1.35	1.08	1.14	0.85	0.86	0.87	0.80	0.79
5-9	0.64	0.50	0.38	0.34	0.32	0.36	0.36	0.34	0.32
10-14	0.52	0.37	0.29	0.27	0.24	0.26	0.25	0.33	0.22
15-19	0.70	0.58	0.50	0.54	0.51	0.56	0.58	0.58	0.68
20-24	1.08	0.67	0.60	0.63	0.60	0.57	0.54	0.56	0.65
25-29	1.50	0.83	0.71	0.72	0.70	0.61	0.68	0.69	0.67
30-34	1.77	1.11	0.95	0.98	0.89	0.97	0.79	0.92	0.95
35-39	2.42	1.74	1.47	1.54	1.34	1.51	1.37	1.66	1.38
40-44	3.31	2.55	2.26	2.31	2.38	2.36	2.23	2.31	2.26
45-49	4.92	4.19	3.65	3.86	3.79	3.68	3.52	3.63	3.79
50-54	7.63	6.43	5.55	5.87	5.93	5.73	5.91	5.85	5.54
55-59	10.46	9.25	8.14	8.67	8.61	8.72	8.39	8.77	8.47
60-64	16.52	14.75	13.31	13.56	13.50	13.82	13.19	13.96	13.04
65-69	26.17	23.89	21.99	21.94	21.17	22.36	21.99	22.39	20.50
70-74	45.84	40.93	37.14	37.47	36.60	37.10	35.59	35.76	36.65
75-79	75.14	69.72	63.18	62.37	60.86	65.14	62.69	64.78	62.62
80-84	123.46	117.36	105.10	107.93	103.78	108.33	99.20	108.01	103.65
85 and over	222.12	213.69	210.20	119.73	193.50	217.87	191.75	198.59	197.22

(a) Number of deaths per 1,000 of population of the same age group and sex. The populations used in the calculation of these rates are based on census populations at 30 June 1947, 1954, 1961 and 1966. Rates for years 1967 to 1971 are based on population estimates revised in accordance with the final results of the 1971 Census. (b) Excludes particulars of full-blood Aborigines prior to 1965. (c) Average annual rate per 1,000 of census population, based on deaths in the three year period, i.e. census year and the years preceding and following it. (d) Infant deaths per 1,000 live births registered.



**Infant deaths and death rates—States and Territories**

The next table shows for each State and Territory, for the period 1946 to 1972, the number of deaths under one year of age and the rates of infant mortality under one year. Rates for Australia and the more populous countries of the world for the latest available year are shown in the table International Vital Statistics at the end of this Chapter.

**INFANT MORTALITY UNDER ONE YEAR(a): STATES AND TERRITORIES, 1946 TO 1972**

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Annual average—</b>									
1946-50 . . .	1,990	1,129	770	431	370	187	11	14	4,902
1951-55 . . .	1,852	1,113	730	407	384	184	17	14	4,701
1956-60 . . .	1,770	1,205	717	410	362	176	25	18	4,683
1961-65 . . .	1,685	1,168	696	407	350	156	28	34	4,524
1966-70 . . .	1,567	1,071	669	354	393	127	117	51	4,349
<b>Annual total—</b>									
1968 . . .	1,525	1,010	716	345	398	143	101	45	4,283
1969 . . .	1,625	1,066	691	347	453	139	103	58	4,482
1970 . . .	1,743	1,060	672	367	459	116	126	61	4,604
1971 . . .	1,710	1,107	766	366	464	114	170	80	4,777
1972 . . .	1,663	1,048	697	367	348	127	113	67	4,430
<b>Annual average rate(b)—</b>									
1946-50 . . .	28.91	23.82	27.49	26.50	28.15	26.53	37.37	19.89	26.98
1951-55 . . .	25.11	20.70	23.58	22.55	24.41	23.67	36.28	15.40	23.34
1956-60 . . .	22.24	19.67	20.99	20.50	21.42	20.62	36.00	13.68	21.05
1961-65 . . .	20.32	17.92	19.69	19.07	20.73	18.46	30.76	17.80	19.42
1966-70 . . .	18.99	15.57	18.90	16.60	20.25	15.94	54.91	18.25	18.10
<b>Annual rate(b)—</b>									
1968 . . .	18.67	14.38	20.35	16.27	20.37	17.19	48.46	17.03	17.78
1969 . . .	18.89	15.01	18.89	15.79	21.83	16.46	45.29	18.84	17.92
1970 . . .	19.71	14.52	17.91	16.23	21.23	14.17	48.02	17.55	17.88
1971 . . .	17.37	14.66	19.16	15.92	19.14	13.70	60.03	19.80	17.29
1972 . . .	17.45	14.59	17.76	16.80	15.69	16.23	41.51	16.48	16.72

(a) Excludes particulars of full-blood Aborigines before 1966. (b) Number of deaths of children aged under one year per 1,000 live births registered.

Because of the smallness of the numbers of these deaths occurring in the Australian Capital Territory and the Northern Territory, the rates for these Territories (i.e. number of such deaths per thousand live births) are subject to considerable fluctuation.

**Infant deaths and death rates—Australia**

The fact that out of 642,664 male infants born from 1967 to 1971, 12,859 (20.01 per 1,000) died during the first year of life, while of 611,592 female infants only 9,474 (15.49 per 1,000) died during the first year, accords with the universal experience that during the first few years of life the higher death rate of male infants tends to counteract the excess of male births. Stillbirths, for which masculinity is also higher, are not included in any of the tables relating to deaths.

As shown by the following table, the disparity is greater during the first four weeks of life, termed the neonatal period, than during the remainder of the first year of life, or the post-neonatal period.

## INFANT DEATHS AND MORTALITY RATES(a): AUSTRALIA, 1946 TO 1971

Period	Age at death											Total under one year		
	Days		Total under one week	Weeks			Total under four weeks	Months						
	Under 1	1-6		1	2	3		1-2 (b)	3-5	6-8	9-11			
Males	Fe- males	Per- sons												
Annual average—														
1946-50 . . . . .	1,717	1,297	3,014	259	138	103	3,514	404	415	318	251	2,808	2,094	4,902
1951-55 . . . . .	1,631	1,250	2,881	237	109	86	3,313	396	431	316	245	2,683	2,018	4,701
1956-60 . . . . .	1,737	1,195	2,932	221	116	84	3,353	398	457	271	204	2,662	2,021	4,683
1961-65 . . . . .	1,709	1,187	2,896	191	102	71	3,260	426	417	245	176	2,596	1,928	4,524
1966-70 . . . . .	1,696	1,125	2,821	160	88	72	3,141	407	420	226	155	2,515	1,834	4,349
Annual total—														
1967 . . . . .	1,572	1,144	2,716	169	91	77	3,053	385	390	215	144	2,421	1,766	4,187
1968 . . . . .	1,768	1,050	2,818	146	70	72	3,106	408	394	221	154	2,452	1,831	4,283
1969 . . . . .	1,755	1,151	2,906	155	110	69	3,240	407	432	241	162	2,584	1,898	4,482
1970 . . . . .	1,857	1,150	3,007	160	90	71	3,328	459	454	215	148	2,718	1,886	4,604
1971 . . . . .	1,907	1,121	3,028	177	85	74	3,364	488	494	250	181	2,684	2,093	4,777
Annual average rate(c)—														
1946-50 . . . . .	9.45	7.14	16.59	1.43	0.76	0.56	19.34	2.22	2.29	1.75	1.38	30.08	23.70	26.98
1951-55 . . . . .	8.09	6.20	14.29	1.18	0.54	0.43	16.44	1.97	2.14	1.57	1.22	25.99	20.56	23.34
1956-60 . . . . .	7.81	5.37	13.18	0.99	0.52	0.38	15.07	1.79	2.06	1.22	0.92	23.29	18.69	21.05
1961-65 . . . . .	7.34	5.09	12.43	0.82	0.44	0.30	13.99	1.83	1.79	1.05	0.76	21.67	17.03	19.42
1966-70 . . . . .	7.06	4.68	11.74	0.66	0.37	0.30	13.07	1.69	1.75	0.94	0.65	20.40	15.67	18.10
Annual rate(c)—														
1967 . . . . .	6.85	4.99	11.84	0.74	0.40	0.33	13.31	1.68	1.70	0.94	0.63	20.57	15.82	18.26
1968 . . . . .	7.34	4.36	11.70	0.60	0.29	0.30	12.89	1.69	1.64	0.92	0.64	19.83	15.61	17.78
1969 . . . . .	7.02	4.60	11.62	0.61	0.44	0.28	12.95	1.63	1.73	0.96	0.65	20.14	15.57	17.92
1970 . . . . .	7.21	4.47	11.68	0.62	0.35	0.27	12.92	1.78	1.76	0.84	0.58	20.60	15.02	17.88
1971 . . . . .	6.90	4.06	10.96	0.64	0.31	0.26	12.17	1.77	1.78	0.90	0.65	19.02	15.48	17.29

(a) Excludes particulars of full-blood Aborigines before 1966.

(b) Age four weeks and under three months.

(c) Number of deaths of children aged under one year per 1,000 live births registered.

Plate 22 below, shows infant mortality rates for each year from 1910 to 1972.

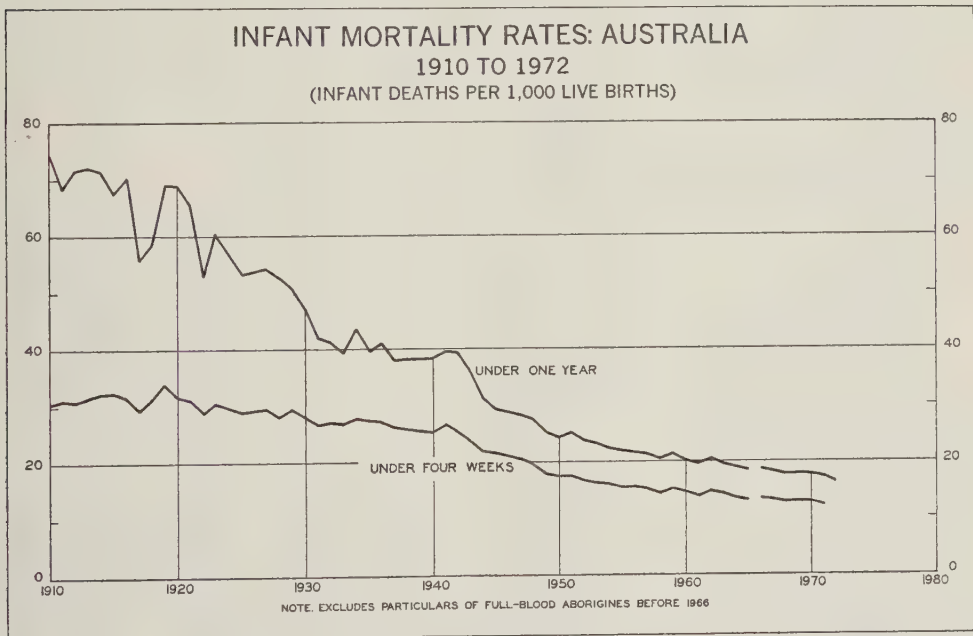


PLATE 22

**Causes of death**

The classification of causes of death adopted for Australia by the Commonwealth Bureau of Census and Statistics at the inception of its mortality statistics in 1907 was that introduced by the International Institute of Statistics in 1893, reviewed by that Institute in 1899, and revised by an International Commission in 1900. This classification became known as the International List of Causes of Death, and further international revisions in 1909 (Second), 1920 (Third), 1929 (Fourth), 1938 (Fifth), 1948 (Sixth), 1955 (Seventh) and 1965 (Eighth), were successively adopted for use in Australian statistics.

The Eighth Revision of the classification (now known as the International Classification of Diseases, Injuries and Causes of Death) was used in Australia for the first time in 1968. Hence, cause of death figures for 1968 and subsequent years are not comparable, for some causes, with figures for 1967 and earlier years.

In order to facilitate the concise presentation of cause of death statistics, the present International Classification provides two special lists of causes for tabulation—the Intermediate List of 150 causes and the Abbreviated List of 50 causes. The latter has been used as the basis of the cause of death tabulations for 1971 which follow. Some categories have been sub-divided to show additional particulars of interest in Australian statistics. Table A shows the total number of males and females who died, the death rates per million of mean population, and the percentage of total deaths. Table B shows deaths for males and females, classified by age groups. More detailed data on causes of death will be found in the bulletin *Causes of Death* (4.7), No. 8.

### A. CAUSES OF DEATH: NUMBERS, PROPORTIONS AND CRUDE RATES(a), MALES AND FEMALES, AUSTRALIA, 1971

#### ABBREVIATED LIST OF 50 CAUSES WITH CERTAIN SUB-DIVISIONS

Cause of death	Males			Females			
	ICD numbers	Number of deaths	Percentage of total	Crude rates(a)	Number of deaths	Percentage of total	Crude rates(a)
B 1 Cholera . . . . .	000	..	..	..	..	..	..
B 2 Typhoid fever . . . . .	001	..	..	..	..	..	..
B 3 Bacillary dysentery and amoebiasis . . . . .	004, 006	6	(b)	1	3	(b)	(c)
B 4 Enteritis and other diarrhoeal diseases . . . . .	008, 009	177	0.3	28	175	0.4	28
B 5 Tuberculosis of respiratory system . . . . .	010-012	91	0.1	14	26	0.1	4
B 6 Other tuberculosis, including late effects . . . . .	013-019	42	0.1	7	23	(b)	4
B 7 Plague . . . . .	020	..	..	..	..	..	..
B 8 Diphtheria . . . . .	032	..	..	..	1	(b)	(c)
B 9 Whooping cough . . . . .	033	1	(b)	(c)	..	..	..
B 10 Streptococcal sore throat and scarlet fever . . . . .	034	3	(b)	(c)	..	..	..
B 11 Meningococcal infection . . . . .	036	13	(b)	2	10	(b)	2
B 12 Acute poliomyelitis . . . . .	040-043	1	(b)	(c)	..	..	..
B 13 Smallpox . . . . .	050	..	..	..	..	..	..
B 14 Measles . . . . .	055	11	(b)	2	7	(b)	1
B 15 Typhus and other rickettsioses . . . . .	080-083	..	..	..	1	(b)	(c)
B 16 Malaria . . . . .	084	..	..	..	1	(b)	(c)
B 17 Syphilis and its sequelae . . . . .	090-097	16	(b)	2	5	(b)	1
B 18 All other infective and parasitic diseases . . . . .	Remainder of 000-136	170	0.3	26	131	0.3	21
B 19 Malignant neoplasms—							
(i) Digestive organs . . . . .	150-159	3,187	5.2	496	2,817	5.7	443
(ii) Lung . . . . .	162	2,886	4.7	449	520	1.0	82
(iii) Skin . . . . .	172, 173	293	0.5	46	196	0.4	31
(iv) Breast . . . . .	174	12	(b)	2	1,601	3.2	252
(v) Genital organs . . . . .	180-187	1,030	1.7	160	1,118	2.3	176
(vi) Urinary organs . . . . .	188, 189	570	0.9	89	272	0.5	43
(vii) Leukaemia and aleukaemia . . . . .	204-207	439	0.7	68	297	0.6	47
(viii) Other malignant and lymphatic neoplasms . . . . .	Remainder of 140-209	1,778	2.9	277	1,322	2.7	208
Total, B19 . . . . .		10,195	16.7	1,587	8,143	16.4	1,281
B 20 Benign neoplasms and neoplasms of unspecified nature . . . . .	210-239	90	0.1	14	99	0.2	16
B 21 Diabetes mellitus . . . . .	250	780	1.3	121	1,021	2.1	161
B 22 Avitaminoses and other nutritional deficiency . . . . .	260-269	63	0.1	10	62	0.1	10
B 23 Anaemias . . . . .	280-285	82	0.1	13	130	0.3	20
B 24 Meningitis . . . . .	320	46	0.1	7	31	0.1	5
B 25 Active rheumatic fever . . . . .	390-392	4	(b)	1	8	(b)	1
B 26 Chronic rheumatic heart disease . . . . .	393-398	464	0.8	72	467	0.9	73
B 27 Hypertensive disease . . . . .	400-404	659	1.1	103	970	2.0	153
B 28 Ischaemic heart disease . . . . .	410-414	20,116	32.9	3,131	13,457	27.1	2,117
B 29 Other forms of heart disease . . . . .	420-429	1,996	3.3	311	2,554	5.2	402
B 30 Cerebrovascular disease . . . . .	430-438	6,497	10.6	1,011	9,234	18.6	1,452
B 31 Influenza . . . . .	470-474	50	0.1	8	46	0.1	7
B 32 Pneumonia . . . . .	480-486	1,415	2.3	220	1,310	2.6	206
B 33 Bronchitis, emphysema and asthma . . . . .	490-493	3,151	5.2	490	760	1.5	120
B 34 Peptic ulcer . . . . .	531-533	355	0.6	55	197	0.4	31
B 35 Appendicitis . . . . .	540-543	32	0.1	5	16	(b)	3
B 36 Intestinal obstruction and hernia . . . . .	550-553, 560	159	0.3	25	198	0.4	31
B 37 Cirrhosis of liver . . . . .	571	529	0.9	82	239	0.5	38
B 38 Nephritis and nephrosis . . . . .	580-584	371	0.6	58	375	0.8	59
B 39 Hyperplasia of prostate . . . . .	600	219	0.4	34	..	..	..
B 40 Abortion . . . . .	640-645	..	..	..	11	(b)	2

For footnotes see end of table next page.



**A. CAUSES OF DEATH: NUMBERS, PROPORTIONS AND CRUDE RATES(a), MALES AND FEMALES, AUSTRALIA, 1971—continued**

**ABBREVIATED LIST OF 50 CAUSES WITH CERTAIN SUB-DIVISIONS—continued**

Cause of death	Males			Females			
	ICD numbers	Number of deaths	Percentage of total	Crude rates(a)	Number of deaths	Percentage of total	Crude rates(a)
B41 Other complications of pregnancy, childbirth and the puerperium. Delivery without mention of complication	630-639, 650-678						
B42 Congenital anomalies	740-759	656	1.1	102	624	1.3	98
B43 Birth injury, difficult labour and other anoxic and hypoxic conditions	764-768, 772, 776	479	0.8	75	332	0.7	52
B44 Other causes of perinatal mortality	Remainder of 760-779	989	1.6	154	754	1.5	119
B45 Symptoms and ill-defined conditions	780-796	310	0.5	48	336	0.7	53
B46 (i) Arteriosclerosis	440	994	1.6	155	1,356	2.7	213
(ii) Other diseases of circulatory system	441-448, 450-458	1,018	1.7	158	818	1.6	129
(iii) Other diseases of respiratory system	460-466, 500-508, 510-519	548	0.9	85	394	0.8	62
(iv) All other diseases	Remainder of 240-738	2,114	3.5	329	2,429	4.9	382
Total, B46	E810-E823	2,895	4.7	451	952	1.9	150
BE47 Motor vehicle accidents	E800-E807, E825-E949	1,857	3.0	289	1,098	2.2	173
BE48 All other accidents	E950-E959	1,150	1.9	179	588	1.2	92
BE49 Suicide and self-inflicted injuries	E960-E999	260	0.4	40	144	0.3	23
BE50 All other external causes							
All causes		61,074	100.0	9,506	49,576	100.0	7,798

(a) Number of deaths per million of estimated mean population. (b) Less than 0.05. (c) Less than 0.5.

**B. CAUSES OF DEATH: MALES AND FEMALES IN AGE GROUPS, AUSTRALIA, 1971**

**ABBREVIATED LIST OF 50 CAUSES (BASED ON THE EIGHTH REVISION OF THE INTERNATIONAL LIST)**

Cause of death(a)		Number of deaths in age groups (years)											Not stated	Total
		Sex	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75 and over		
B 3	Bacillary dysentery and amoebiasis	M	..	1	..	1	..	..	..	1	1	2	..	6
		F	1	..	..	..	..	..	..	..	..	2	..	3
B 4	Enteritis and other diarrhoeal diseases	M	75	40	4	2	..	..	6	5	16	29	..	177
		F	62	33	5	1	..	2	6	13	15	38	..	175
B 5	Tuberculosis of respiratory system	M	..	..	..	..	3	1	12	18	27	30	..	91
		F	..	..	..	..	..	1	5	8	7	5	..	26
B 6	Other tuberculosis, including late effects	M	..	2	..	..	1	1	6	10	13	9	..	42
		F	1	..	..	..	..	4	6	4	3	5	..	23
B 8	Diphtheria	F	..	..	1	..	..	..	..	..	..	..	..	1
B 9	Whooping cough	M	..	..	..	1	..	..	..	..	..	..	..	1
B10	Streptococcal sore throat and scarlet fever	M	1	..	1	..	..	..	1	..	..	..	..	3
		F	3	2	4	1	..	1	2	..	..	..	..	13
B11	Meningococcal infection	M	4	2	..	1	..	..	2	1	..	..	..	10
		F	..	..	..	..	..	1	..	..	..	..	..	1
B12	Acute poliomyelitis	M	3	5	1	1	..	..	..	1	..	..	..	11
B14	Measles	M	1	1	3	1	..	..	..	..	..	1	..	7
		F	1	..	..	..	..	..	..	..	..	..	..	1
B15	Typhus and other rickettsioses	F	1	..	..	..	..	..	..	..	..	..	..	1
B16	Malaria	F	..	..	..	..	..	..	..	2	1	..	..	1
B17	Syphilis and its sequelae	M	2	..	..	..	..	..	2	3	5	4	..	16
		F	..	..	..	..	..	1	2	..	2	..	..	5
B18	All other infective and parasitic diseases	M	53	12	7	10	7	10	17	23	15	16	..	170
		F	32	7	5	4	6	4	8	17	22	26	..	131
B19	Malignant neoplasms—													
(i)	Digestive organs	M	..	1	..	4	18	83	355	749	1,028	949	..	3,187
		F	1	1	2	10	15	78	256	506	760	1,188	..	2,817
(ii)	Lung	M	..	..	..	1	5	75	346	911	1,047	501	..	2,886
		F	..	..	..	..	2	17	98	148	161	94	..	520
(iii)	Skin	M	..	1	1	6	24	38	67	53	54	49	..	293
		F	..	..	..	5	12	24	38	30	24	63	..	196
(iv)	Breast	M	..	..	..	..	..	1	1	3	5	2	..	12
		F	..	..	..	4	31	115	340	393	318	400	..	1,601
(v)	Genital organs	M	..	..	1	16	19	13	21	108	306	546	..	1,030
		F	1	1	..	9	17	51	207	281	290	261	..	1,118
(vi)	Urinary organs	M	..	2	3	3	2	8	65	126	173	188	..	570
		F	1	5	1	2	3	7	14	63	68	108	..	272
(vii)	Leukaemia and aleukaemia	M	1	29	50	22	19	27	31	76	105	79	..	439
		F	1	19	43	25	13	17	17	43	57	62	..	297
(viii)	Other malignant and lymphatic neoplasms	M	5	19	35	58	44	107	282	493	440	295	..	1,778
		F	5	11	24	40	35	76	159	291	335	346	..	1,322
Total, B19		M	6	52	90	110	131	352	1,168	2,519	3,158	2,609	..	10,195
		F	9	37	70	95	128	385	1,129	1,755	2,013	2,522	..	8,143

For footnote see end of table next page.

**B. CAUSES OF DEATH: MALES AND FEMALES IN AGE GROUPS, AUSTRALIA, 1971—continued**  
**ABBREVIATED LIST OF 50 CAUSES (BASED ON THE EIGHTH REVISION OF THE INTERNATIONAL LIST)—continued**

		Number of deaths in age groups (years)											75 and over	Not stated	Total
Cause of death(a)	Sex	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74					
B20 Benign neoplasms and neoplasms of unspecified nature	M	3	..	2	5	5	10	5	20	30	10	..	90		
	F	3	3	3	5	7	8	11	20	21	18	..	99		
B21 Diabetes mellitus	M	..	..	2	6	8	20	44	155	265	280	..	780		
	F	1	..	3	3	4	21	33	137	303	516	..	1,021		
B22 Avitaminoses and other nutritional deficiency	M	12	3	..	1	..	1	5	9	10	22	..	63		
	F	7	8	1	..	1	1	8	8	28	..	66			
B23 Anaemias	M	1	1	2	4	1	..	2	6	17	48	..	88		
	F	1	1	3	1	4	5	13	22	76	..	130			
B24 Meningitis	M	22	2	3	..	2	1	4	2	7	3	..	46		
	F	14	1	4	1	1	..	3	..	6	1	..	31		
B25 Active rheumatic fever	M	..	..	1	..	..	..	..	..	1	2	..	4		
	F	..	2	1	1	1	..	1	1	..	1	..	8		
B26 Chronic rheumatic heart disease	M	..	1	2	15	17	39	61	108	139	82	..	464		
	F	..	..	1	5	14	23	63	83	122	156	..	467		
B27 Hypertensive disease	M	..	..	..	..	7	27	45	140	172	268	..	659		
	F	..	..	..	..	1	24	51	109	170	615	..	970		
B28 Ischaemic heart disease	M	..	..	..	7	56	534	2,207	4,914	6,161	6,233	4	20,116		
	F	..	..	..	5	18	135	538	1,671	3,636	7,454	..	13,457		
B29 Other forms of heart disease	M	5	3	3	18	28	44	106	215	407	1,166	1	1,996		
	F	10	3	3	12	12	39	63	105	413	1,894	..	2,554		
B30 Cerebrovascular disease	M	3	2	4	15	36	110	348	952	1,830	3,196	1	6,497		
	F	3	2	2	14	41	141	384	755	1,866	6,025	1	9,234		
B31 Influenza	M	4	2	..	..	3	..	8	2	12	19	..	50		
	F	2	1	..	2	1	1	1	5	7	26	..	46		
B32 Pneumonia	M	205	33	14	19	17	37	92	134	240	624	..	1,415		
	F	138	41	7	10	17	22	43	77	160	795	..	1,310		
B33 Bronchitis, emphysema and asthma	M	7	3	10	21	20	37	151	572	1,105	1,225	..	3,151		
	F	3	5	7	21	16	33	71	141	166	297	..	760		
B34 Peptic ulcer	M	..	..	..	1	4	14	43	76	101	116	..	355		
	F	..	..	..	1	5	8	16	20	46	101	..	197		
B35 Appendicitis	M	1	2	3	1	2	2	3	4	6	8	..	32		
	F	..	..	1	..	1	..	1	3	7	3	..	16		
B36 Intestinal obstruction and hernia	M	17	1	3	1	..	4	10	20	36	67	..	159		
	F	23	1	..	1	4	4	12	12	27	114	..	198		
B37 Cirrhosis of liver	M	1	1	5	1	8	66	168	135	111	33	..	529		
	F	1	2	1	2	7	29	60	66	44	27	..	239		
B38 Nephritis and nephrosis	M	1	4	3	10	9	21	36	82	86	119	..	371		
	F	1	2	2	9	11	24	59	86	63	118	..	375		
B39 Hyperplasia of prostate	M	..	..	..	..	..	..	..	5	48	166	..	219		
B40 Abortion	F	..	..	..	2	5	4	..	..	..	..	..	11		
B41 Other complications of pregnancy, childbirth and the puerperium. Delivery without mention of complication	F	..	..	..	12	17	11	..	..	..	..	..	40		
B42 Congenital anomalies	M	471	59	29	25	7	10	14	22	15	4	..	656		
	F	458	49	28	19	10	12	19	14	12	3	..	624		
B43 Birth injury, difficult labour and other anoxic and hypoxic conditions	M	475	2	1	..	1	..	..	..	..	..	..	479		
	F	332	..	..	..	1	..	..	..	..	..	..	332		
B44 Other causes of perinatal mortality	M	987	1	..	..	..	..	..	..	..	..	..	989		
	F	750	1	3	..	..	..	..	..	..	..	..	754		
B45 Symptoms and ill-defined conditions	M	49	3	4	15	21	18	39	25	25	108	3	310		
	F	35	3	5	11	7	11	15	13	26	209	1	336		
B46 (i) Arteriosclerosis	M	..	..	..	..	1	..	10	35	175	773	..	994		
	F	..	..	..	..	2	2	2	16	115	1,221	..	1,356		
(ii) Other diseases of circulatory system	M	3	1	3	7	5	26	59	180	332	402	..	1,018		
	F	..	1	3	3	9	23	40	80	173	486	..	818		
(iii) Other diseases of respiratory system	M	130	13	7	6	7	26	75	110	167	..	548			
	F	83	15	3	9	4	14	23	33	49	161	..	394		
(iv) All other diseases	M	49	32	41	82	60	118	241	413	490	587	1	2,114		
	F	36	22	35	51	64	127	287	368	481	958	..	2,429		
Total, B46	M	182	46	51	95	73	151	336	703	1,107	1,929	1	4,674		
	F	119	38	41	63	77	166	352	497	818	2,826	..	4,997		
BE47 Motor vehicle accidents	M	11	56	180	1,107	462	271	268	235	171	132	2	2,895		
	F	14	48	80	280	96	69	90	107	94	74	..	952		
BE48 All other accidents	M	80	119	135	265	200	228	223	182	148	277	..	1,857		
	F	60	75	32	57	32	36	53	66	112	575	..	1,098		
BE49 Suicide and self-inflicted injuries	M	..	..	8	182	187	202	254	158	104	55	..	1,150		
	F	..	..	3	67	108	106	139	91	57	17	..	588		
BE50 All other external causes	M	4	9	7	37	41	46	57	27	27	5	..	260		
	F	7	9	6	21	19	22	22	21	12	5	..	144		
All causes	M	2,684	467	579	1,977	1,358	2,259	5,743	11,483	15,616	18,896	12	61,074		
	F	2,093	375	321	727	670	1,351	3,264	5,919	10,281	24,573	2	49,576		

(a) Categories of the Abbreviated List for which no deaths were recorded in 1971 have been omitted from this table. For details of such categories see Table A, pages 184-5.

## Causes of death—children under one year

Causes of death of children under one year of age should be considered in relation to age at death because the emphasis on various causes changes rapidly as age at death varies. A summary for 1971, of deaths of children under one year of age, classified according to principal causes of death and age at death, is given in the following table.

DEATHS OF CHILDREN UNDER ONE YEAR OF AGE, BY CAUSE OF DEATH  
AUSTRALIA, 1971

Inter- national Classifi- cation of Diseases number	Cause of death	Age at death										
		Days		Total under one week	Weeks		Total under four weeks	Months			Total under one year	
		Under 1	1-6		1	2		1-2 (a)	3-5	6-11		
760	Chronic circulatory and genito- urinary diseases in mother . .	14	7	21	2	..	..	23	1	..	..	24
761	Other maternal conditions un- related to pregnancy . .	72	22	94	3	1	3	101	..	..	..	101
762	Toxaemias of pregnancy . .	76	56	132	3	..	..	135	1	1	..	137
763	Maternal ante and intrapartum infection . .	35	5	40	2	..	1	43	..	..	..	43
764-768	Difficult labour . .	121	62	183	5	..	..	188	1	2	..	191
769	Other complications of pregnancy and childbirth . .	443	175	618	11	..	2	631	3	..	..	634
770	Conditions of placenta . .	219	97	316	7	..	2	325	1	..	..	326
771	Conditions of umbilical cord . .	29	19	48	..	..	..	48	..	..	..	48
772, 773	Birth injury without mention of cause . .	19	31	50	4	1	3	58	1	2	1	62
774, 775	Haemolytic disease of newborn . .	44	32	76	4	2	..	82	..	1	..	83
776	Anoxic and hypoxic conditions not elsewhere classified . .	270	247	517	19	2	4	542	8	3	1	554
777	Immaturity unqualified . .	224	51	275	1	1	..	277	1	1	..	279
778, 779	Other conditions of newborn . .	16	35	51	4	1	2	58	2	1	1	62
740-759	Congenital anomalies . .	272	212	484	71	39	25	619	136	97	77	929
000-136	Infections . .	5	23	28	11	10	2	51	52	52	84	239
480-486	Pneumonia . .	11	22	33	12	10	15	70	92	109	72	343
(b)	Other diseases . .	33	23	56	14	12	10	92	139	178	137	546
E911-E913	Inhalation or ingestion of food or other object causing obstruction or suffocation, and accidental mechanical suffocation . .	..	1	1	3	2	3	9	37	36	28	110
(c)	Other external causes . .	4	1	5	1	4	2	12	13	11	30	66
	All causes . .	1,907	1,121	3,028	177	85	74	3,364	488	494	431	4,777

(a) Age four weeks and under 3 months.

(b) 140-474, 490-738, 780-796.

(c) E800-E910, E914-E999.

## Deaths from certain important causes

In the preceding tables, particulars have been given for each of the causes of death comprising the Abbreviated Classification according to the Eighth Revision of the International List. Certain important causes are discussed in detail below. The Abbreviated Classification numbers used in Tables A and B (pages 184-6) are indicated in parentheses for each cause or group of causes.

*All forms of tuberculosis (B5, B6).* The reduction in mortality from tuberculosis is shown by the decline in the crude death rate from tubercular diseases, which fell from 49 per 100,000 of mean population in 1931 to 18 in 1951, and to 1.4 in 1971. The reductions in the younger age groups are much greater. In making these comparisons, consideration of the effect of the change in basis from the Fifth to the Sixth Revision of the International List is particularly important.

*Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues (B19).* Deaths classified under this heading according to the Sixth, Seventh and Eighth Revisions of the International List (used in Australia for deaths registered since 1950) are not directly comparable in total with those on the Fifth Revision basis (see Year Book No. 39, p. 628).

The most common sites of malignant neoplasms causing death in 1971 are identified in Table B (pages 185-6). Malignant neoplasms are predominantly diseases of advanced age, but leukaemia and aleukaemia frequently cause death at early ages.

Deaths in age groups and age-specific death rates for males and females who died from malignant neoplasms in 1971 are given in the table below, together with figures for 1950 and 1960.



**DEATHS AND DEATH RATES FROM MALIGNANT NEOPLASMS(a), BY AGE GROUP AND SEX  
AUSTRALIA, 1950 TO 1971(b)**

Age group (years)	1950				1960				1971			
	Number		Rate(c)		Number		Rate(c)		Number		Rate(c)	
	M	F	M	F	M	F	M	F	M	F	M	F
Under 15 . . . . .	92	53	8	5	141	110	9	7	148	116	8	6
15-29 . . . . .	95	75	10	8	112	75	10	7	163	146	10	10
30-44 . . . . .	249	413	27	47	361	517	32	49	430	462	36	41
45-54 . . . . .	552	669	118	148	852	831	138	143	1,168	1,129	160	159
55-64 . . . . .	1,294	1,171	347	299	1,671	1,186	401	276	2,519	1,755	462	312
65 and over . . . .	3,072	2,694	1,014	748	4,067	3,373	1,075	679	5,767	4,535	1,291	734
<b>Total . . . . .</b>	<b>5,355</b>	<b>5,075</b>	<b>130</b>	<b>125</b>	<b>7,207</b>	<b>6,092</b>	<b>139</b>	<b>120</b>	<b>10,195</b>	<b>8,143</b>	<b>159</b>	<b>128</b>
	(d)				(e)							

(a) Includes neoplasms of lymphatic and haematopoietic tissues. (b) Excludes particulars of full-blood Aborigines prior to 1967. (c) Number of deaths per 100,000 of population at risk. For the individual age groups, the population at risk is that estimated at 30 June. For the total of all ages, the population at risk is the calendar year mean population.

(d) Includes 1 male, age not stated. (e) Includes 3 males, age not stated.

Death rates from malignant neoplasms per 100,000 of mean population for Australia and for various other countries for the latest available year are as follows: Israel, 116; Japan, 116; South Africa (white population), 135; Poland, 138; Canada, 141; Australia, 143; United States of America, 162; Italy, 174; Uruguay, 190; Netherlands, 195; France, 206; England and Wales, 236; Scotland, 242.

*Causes of infant mortality.* See paragraph devoted to causes of infant deaths on page 187.

*Diseases of the circulatory system (B25-B30, part B46).* This class is the largest among causes of death, representing 55 per cent of total deaths in 1971. The following table shows the number of deaths and death rates per 100,000 of mean population from diseases of the circulatory system for the years 1950-71. Comparability of the figures is not significantly affected by the various revisions of the International Classification of Diseases.

**DEATHS AND DEATH RATES FROM DISEASES OF THE CIRCULATORY SYSTEM  
BY SEX, AUSTRALIA, 1950 TO 1971(a)**

Year	Cerebrovascular disease				Heart disease				Other diseases of circulatory system				Total			
	Number		Rate(b)		Number		Rate(b)		Number		Rate(b)		Number		Rate(b)	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1950 . . . . .	4,035	5,351	98	132	14,687	10,256	356	253	1,736	1,802	42	44	20,458	17,409	496	429
1955 . . . . .	4,811	6,224	103	137	16,382	11,303	352	249	1,843	1,886	40	42	23,036	19,413	495	427
1960 . . . . .	5,183	6,659	100	131	18,654	13,173	359	259	2,068	1,970	40	39	25,905	21,802	499	429
1965 . . . . .	5,809	7,835	101	139	21,843	15,546	381	275	2,029	2,071	35	37	29,681	25,452	517	450
1970 . . . . .	6,508	9,178	103	148	23,639	17,269	376	278	2,266	2,516	36	40	32,413	28,963	515	466
1971 . . . . .	6,497	9,234	101	145	22,980	17,176	358	270	2,271	2,454	35	39	31,748	28,864	494	454

(a) Excludes particulars of full-blood Aborigines prior to 1967. (b) Per 100,000 of mean population.

*Accidents, poisonings and violence (BE47 to BE50).* Deaths in this class are classified according to external cause and not according to nature of injury. The classification provides sub-groups for accidents, including adverse reactions to prophylactic inoculations, therapeutic misadventures and late effects of accidental injury; suicide; homicide and injuries purposely inflicted by other persons; injuries undetermined whether accidentally or purposely inflicted; and injury resulting from operations of war, including delayed effects.

The following table, showing the death rates in the main sub-groups per 100,000 of mean population, indicates that the death rate from violence is between two and three times as great for males as for females. The low level of the rates and proportions for the years 1941-45 is due largely to the exclusion of deaths of defence personnel from accidents, suicide and homicide, though the rates have been based on total mean population (including defence personnel). A further contributing factor is the decrease during this period in the number of automobile accidents. From July 1947 deaths of defence personnel from accidents, etc. have again been included.

**ACCIDENTS, POISONINGS, AND VIOLENCE: DEATH RATES(a), BY SEX  
AUSTRALIA, 1941 TO 1971(b)**

Death rate from—												
Period	Motor vehicle accidents		Suicide		Homicide(c)		Other violence(d)		Total violence		All violence, percentage of total deaths	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1941-45 .	19	5	11	5	1	1	48	21	79	31	7.30	3.48
1946-50 .	30	6	14	5	1	1	46	21	91	33	8.44	3.83
1951-55 .	38	9	15	5	2	1	44	22	99	37	9.64	4.53
1956-60 .	37	11	17	6	2	1	38	20	93	39	9.57	4.95
1961-65 .	38	13	19	9	2	1	34	19	93	42	9.54	5.50
1966-70 .	43	15	17	9	2	1	33	20	95	45	9.61	5.71
1967 .	42	14	19	11	2	1	35	20	98	47	10.08	6.11
1968 .	43	14	17	8	2	1	34	21	95	45	9.43	5.51
1969 .	44	16	17	8	2	1	30	18	92	43	9.54	5.65
1970 .	46	17	17	8	2	1	32	19	97	45	9.67	5.58
1971 .	45	15	18	9	2	1	31	18	96	44	10.09	5.61

(a) Number of deaths per 100,000 of mean population. (b) Excludes particulars of full-blood Aborigines before 1967. (c) Includes deaths from injury purposely inflicted by other persons (not in war) and legal intervention. (d) Includes deaths from injury undetermined whether accidentally or purposely inflicted.

In 1971 the total number of deaths from *accidental causes* (BE47, BE48) was 6,802 (4,752 males and 2,050 females). Over half of the accidental deaths were the result of transport accidents. Of these, the numbers attributable to the major causes, and the percentages of the total accidental deaths in each case, were as follows: Motor vehicle traffic accidents, 3,740 (54.98 per cent); motor vehicle non-traffic accidents, 107 (1.57 per cent); other road vehicle accidents, 31 (0.46 per cent); railway accidents, 83 (1.22 per cent); water transport accidents, 101 (1.48 per cent); aircraft accidents, 41 (0.60 per cent); a total of 4,103 (60.32 per cent). Other important causes were accidental falls, 1,171 (17.22 per cent); accidental drowning (not in transport), 422 (6.20 per cent); accidents caused by fires and flames, 168 (2.47 per cent); and accidental poisonings, 119 (1.75 per cent).

Deaths from *suicide* (BE49) in 1971 numbered 1,738 (males 1,150; females, 588). Poisoning, other than by gases, occurred in 705 cases (40.56 per cent of total deaths by suicide). Other important modes adopted, together with the numbers and relevant percentages, were as follows; firearms and explosives, 402 (23.13 per cent); poisoning by gases, 209 (12.03 per cent); hanging or strangulation 204 (11.74 per cent); submersion (drowning), 83 (4.78 per cent); other and unspecified modes, 135 (7.77 per cent). Of the 1,150 males who committed suicide, 374 (32.52 per cent) used firearms or explosives. For females the most common mode was poisoning (other than by gases). This was used in 390 cases (66.33 per cent).

Of the 404 deaths assigned in 1971 to all other external causes (BE50), there were 228 deaths from homicide and injury purposely inflicted by other persons, 5 deaths from legal intervention by firearms, 163 deaths from injury undetermined whether accidentally or purposely inflicted (of which 76 were due to poisoning other than by gases) and 8 deaths from late effects of injury due to operations of war.

### Vital statistics of External Territories

The following table shows, for the year 1971, the number of marriages, births and deaths registered in the External Territories under the control of Australia. More detailed information will be found in *Demography*, Bulletin No. 86.

#### EXTERNAL TERRITORIES: VITAL STATISTICS, 1971

Territory	Marriages	Births	Deaths
Christmas Island(a)	8	34	4
Cocos (Keeling) Islands(a)	11	13	5
Norfolk Island(a)	11	24	16
Papua New Guinea(b)	388	1,323	170

(a) Total population. (b) Non-indigenous population only.

## International vital statistics

In the following table vital statistics rates for certain countries are shown. Crude marriage, birth, and death rates represent the number of 'events' reported for the year stated per 1,000 of the population. Infant mortality rates are the number of deaths which occurred under one year of age per 1,000 live births. The true death rates (reciprocals of the expectation of life at birth) have been computed from the life tables for the respective countries as published in the United Nations *Demographic Yearbook*, 1971 (see explanation of true death rates, pages 177-8).

In many instances the rates shown in the following table are estimates and the results of sample surveys only. Reference should be made to the detailed comments contained in the United Nations *Demographic Yearbook*, 1971 (see particularly Technical Notes on Statistical Tables and footnotes to the tables). The countries are arranged in the same order as in the table on page 147 of the Population chapter.

## VITAL STATISTICS RATES: CERTAIN COUNTRIES—LATEST AVAILABLE YEAR

(Source: United Nations *Demographic Yearbook*, 1971)

Country	Year	Rates(a)				Year	True death rates(b)	
		Marriage	Birth	Death	Infant mortality		Male	Female
<b>Africa—</b>								
Arab Republic of Egypt . . . . .	1970	9.7	34.9	15.0	(d)119.0	1960	19.4	18.6
Ethiopia . . . . .	1965-70	n.a.	45.6	25.0	(f)84.2	1965-70	26.0	
<b>South Africa—</b>								
Asian population . . . . .	1970	8.8	33.8	7.0	(k)37.5	1959-61	17.3	16.8
Coloured population . . . . .	1970	6.7	36.7	14.2	(k)121.3	1959-61	20.2	18.4
White population . . . . .	1970	11.0	23.6	8.1	(k)19.4	1959-61	15.4	14.0
Morocco . . . . .	1965-70	n.a.	49.5	16.5	(i)149.0	1965-70		19.8
Algeria . . . . .	1965-70	(e)4.7	49.1	16.9	86.3	1965-70		19.7
Tanzania . . . . .	1967	n.a.	47.6	22.0	160-165	1967	24-25	
Kenya . . . . .	1966-70	n.a.	47.8	17.5	(d)55.0	1965-70	21.1	
<b>North America—</b>								
United States of America . . . . .	1971	10.6	17.3	9.3	19.2	1970	14.1	
Mexico . . . . .	1970	7.3	43.4	9.9	68.5	1965-70	16.4	15.7
Canada . . . . .	1969	8.6	17.0	7.3	19.3	1965-67	14.5	13.3
<b>South America—</b>								
Brazil . . . . .	1966-70	(d)3.8	37.8	9.5	n.a.	1965-70		16.5
Argentina . . . . .	1968	(e)6.7	21.7	9.5	(e)58.3	1965-70	15.6	14.2
Colombia . . . . .	1966-70	(d)3.7	44.6	10.6	(h)70.4	1950-52	22.6	21.8
Peru . . . . .	1971	(h)4.1	22.6	(c)11.1	(i)72.5	1960-65	19.0	18.0
Venezuela . . . . .	1970	6.0	(c)40.9	(c)7.8	48.7	1961	15.1	
<b>Asia—</b>								
Indonesia . . . . .	1966-70	(i)10.6	48.3	19.4	(j)125.0	1960	21.1	21.1
Pakistan . . . . .	1966-70	n.a.	50.9	18.4	(j)142.0	1962	18.6	20.5
Japan . . . . .	1971	10.5	19.2	6.6	12.4	1968	14.5	13.5
Philippines . . . . .	1966-70	44.7	12.0	(d)67.3		1946-49	20.5	18.7
Thailand . . . . .	1965-70	4.2	42.8	10.4	(d)26.2	1960	18.7	17.0
Turkey . . . . .	1967	n.a.	39.6	14.6	153.0	1966		18.6
Korea, Republic of . . . . .	1965-70		35.6	11.0	n.a.	1966	16.7	15.6
China, Peoples Republic . . . . .	1965-70	n.a.	33.1	15.3	n.a.	1965-70	20.0	
Korea, North . . . . .	1965-70	n.a.	38.8	11.2	n.a.	1965-70	17.3	
Sri Lanka (Ceylon) . . . . .	1970	6.8	29.4	7.5	(h)50.3	1962	16.2	16.3
Nepal . . . . .	1965-70	n.a.	44.6	22.9	n.a.	1965-70	24.6	
<b>Europe—</b>								
<b>Germany—</b>								
Eastern Germany . . . . .	1970	7.7	13.9	14.1	18.8	1967-68	14.5	13.4
Federal Republic of . . . . .	1971	7.2	12.7	11.9	(g)23.6	1966-68	14.8	13.6
United Kingdom . . . . .	1971	(g)8.5	16.2	11.6	18.0	1968-70	14.6	13.4
England and Wales . . . . .	1971	(g)8.5	16.0	11.6	17.6	1968-70	14.6	13.4
Northern Ireland . . . . .	1971	(g)8.1	20.7	10.6	23.0	1968-70	14.7	13.6
Scotland . . . . .	1971	(g)8.1	16.6	11.8	19.9	1968-70	15.0	13.7
Italy . . . . .	1971	7.5	16.8	9.6	28.3	1964-67	14.7	13.6
France . . . . .	1971	7.9	17.1	10.7	14.4	1969	14.8	13.3
Spain . . . . .	1970	7.4	19.6	8.5	27.9	1960	14.9	13.9
Poland . . . . .	1971	8.9	17.2	(g)8.2	29.7	1965-66	15.0	13.7
Yugoslavia . . . . .	1971	8.9	18.2	8.7	(g)55.2	1967-68	15.6	14.5
Romania . . . . .	1970	7.2	21.1	9.5	49.4	1968	15.3	14.3
Czechoslovakia . . . . .	1970	8.7	15.8	11.4	22.1	1966	14.9	13.6
Netherlands . . . . .	1971	9.3	18.8	8.4	11.1	1970	14.1	13.1
Hungary . . . . .	1971	9.1	14.5	11.9	34.9	1968	15.0	13.9
Greece . . . . .	1971	8.0	16.0	8.3	27.0	1960-62	14.8	14.1
<b>Oceania—</b>								
Australia . . . . .	1971	9.2	21.7	8.7	17.4	1970	14.8	13.5
New Zealand . . . . .	1970	9.2	22.1	8.8	16.7	1960-62	14.6	13.6
<b>U.S.S.R.—</b>								
Union of Soviet Socialist Republics . . . . .	1971	10.0	17.8	8.2	22.9	1968-69	15.4	13.5

(a) Crude marriage, birth and death rates, i.e., number of marriages, births and deaths per 1,000 of population. Infant mortality—number of deaths of children under one year of age per 1,000 live births. (b) Number of deaths per 1,000 males and 1,000 females respectively in stationary population (see explanation on page 177). (c) 1966-70. (d) 1969. (e) 1967. (f) 1963. (g) 1970. (h) 1968. (i) 1962. (j) 1962-65. (k) 1971.



## CHAPTER 9

### HOUSING AND BUILDING

Pages 191-8 of this chapter give details of the *characteristics of dwellings obtained from censuses*, pages 198-209 contain a *summary of building activities*, pages 209-20 outline *government activities in the field of housing*, and pages 220-26 relate to *financial arrangements associated with the erection or purchase of homes*.

Further information on dwellings obtained from censuses is available in the detailed tables of the publications issued for each individual Census. A list of the 1971 Census publications is shown at the end of this volume.

More detailed information on building activity is contained in the annual bulletin *Building and Construction* (3.1) and the *Quarterly Bulletin of Building Statistics* (3.6), and current information is obtainable also in the *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5), and the mimeographed statements *Building Statistics: Number of New Houses and Flats* (quarterly) (3.5), and *Building Approvals* (monthly) (3.2). Details for particular States are available from publications issued regularly by the Deputy Commonwealth Statistician in each State. The *Housing Quarterly* published by the Commonwealth Department of Housing contains further information on current trends in housing activity.

Commonwealth Government activities relate in the main to the provision of moneys to State Governments under the States Grants (Housing) Act, to the assistance of defence (and eligible ex-service) personnel in the erection and purchase of homes, to assistance to young married couples under the Home Savings Grant Act, to the operation of the Housing Loans Insurance Corporation, and to the provision of homes in the Territories. The annual reports of the Commonwealth Department of Housing, the Defence Service Homes Division and of other Commonwealth and State Housing Authorities show further details of government activities in the field of housing.

#### Census dwellings

At each census of the population, in addition to the questions relating to personal particulars, there have been a number of questions relating to dwellings. A 'dwelling' is defined as any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building, and includes, *in addition to houses and self-contained flats*, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. This section contains particulars of such information on dwellings as is available from the 1971 Census, together with information from earlier censuses. In conformity with the 1967 repeal of section 127 of the Constitution, 1971 Census statistics include Aborigines. In order to provide comparability between the 1971 and 1966 censuses, tables showing 1966 data have been amended to include Aborigines or their dwellings (except where noted to the contrary) and therefore differ from the 1966 tables previously published.

#### Number of dwellings

The following table shows the number of occupied and unoccupied dwellings in Australia at each census from 1911 to 1971. Occupied dwellings are classified into 'private' and 'other than private' dwellings (*see* page 192 for definitions of 'private' and 'other than private' dwellings). Unoccupied dwellings include dwellings whose occupants are temporarily absent, holiday homes, and other temporarily vacant dwellings (*see* page 197 for full explanation of the term 'unoccupied').

**DWELLINGS(a): AUSTRALIA, CENSUSES, 1911 TO 1971**

Census	Occupied		Total	Unoccupied
	Private	Other than private		
1911 . . . . .	894,389	29,070	923,459	33,473
1921 . . . . .	1,107,010	46,275	1,153,285	51,163
1933 . . . . .	1,509,671	37,705	1,547,376	68,772
1947 . . . . .	1,873,623	34,272	1,907,895	47,041
1954 . . . . .	2,343,421	36,932	2,380,353	112,594
1961 . . . . .	2,781,945	35,325	2,817,270	194,114
1966 . . . . .	3,155,340	33,917	3,189,257	263,873
1971 . . . . .	3,670,553	24,006	3,694,559	339,057

(a) Excludes dwellings occupied solely by Aborigines before 1966.

The following table shows the number of occupied and unoccupied dwellings in the urban and rural areas of Australia at the Census of 30 June 1971. For delimitation of 'urban centres' see this Year Book, page 134.

**DWELLINGS: URBAN AND RURAL, AUSTRALIA, CENSUS, 30 JUNE 1971**

Division	Occupied				Unoccupied	
	Private	Other than private	Total		Number	Percentage of total
			Number	Percentage of total		
Urban—						
Major . . .	2,428,912	10,662	2,439,574	66.03	142,731	42.10
Other . . .	755,196	7,734	762,930	20.65	94,183	27.78
Rural . . .	486,445	5,610	492,055	13.32	102,143	30.12
<b>Total . . .</b>	<b>3,670,553</b>	<b>24,006</b>	<b>3,694,559</b>	<b>100.00</b>	<b>339,057</b>	<b>100.00</b>

The total numbers of occupied and unoccupied dwellings in each State and Territory at the Censuses of 1966 and 1971 were as follows.

**DWELLINGS: STATES AND TERRITORIES, CENSUSES, 1966 AND 1971**

State or Territory	Census, 30 June 1966		Census, 30 June 1971	
	Occupied	Unoccupied	Occupied	Unoccupied
New South Wales . . .	1,190,010	101,546	1,364,542	124,522
Victoria . . .	889,053	64,757	1,015,485	88,521
Queensland . . .	450,309	41,818	517,245	51,077
South Australia . . .	302,626	25,110	344,112	30,553
Western Australia . . .	225,701	17,965	286,845	28,274
Tasmania . . .	99,366	10,800	110,420	13,307
Northern Territory . . .	8,637	380	17,792	929
Australian Capital Territory . . .	23,555	1,497	38,118	1,874
<b>Australia . . .</b>	<b>3,189,257</b>	<b>263,873</b>	<b>3,694,559</b>	<b>339,057</b>

**Class of dwelling (1966 and 1971)**

The following table shows the numbers of the various classes of occupied dwellings in the major urban, other urban, and rural areas of Australia at the Census of 30 June 1971 and totals for the Censuses of 1966 and 1971. The numbers of the various classes of dwelling for each State and Territory at the 1971 Census are given in the table on page 193.

**Private dwellings** are classified into the following categories for the 1971 Census:

*private house*—includes separate, semi-detached, attached and terrace or row houses.

*villa unit*—also includes dwellings variously described as town house, cottage unit, villa development, cottage flats.

*self-contained flat*—part of a house or other building which can be completely closed off and which has its own cooking and bathing facilities. Includes home units.

*other private dwellings*—comprise non-self contained parts or rooms of houses, flats or other premises. Also includes sheds, tents, garages, caravans and houseboats occupied on a permanent or semi-permanent basis.

**Other than private dwellings** includes hotels; motels; boarding houses and hostels; educational, religious and charitable institutions; hospitals; defence and penal establishments; caravan parks; staff barracks and quarters, etc.

## Occupied dwellings, by class

NUMBERS AND PERCENTAGE DISTRIBUTION, URBAN AND RURAL(a), AUSTRALIA  
CENSUSES, 1966 AND 1971

Class of dwelling	Census, 30 June 1966		Census, 30 June 1971				Proportion of total occupied dwellings	Inter-censal increase or decrease
	Total	Proportion of total occupied dwellings	Major urban	Other urban	Rural	Total		
Occupied dwellings—								
Private dwellings—								
Private house . . .	2,683,310	84.1	1,949,209	674,203	456,829	3,080,241	83.3	396,931
Villa unit . . .	(b)	(b)	34,131	3,685	1,532	39,348	1.1	n.a.
Self-contained flat . . .	345,645	10.8	389,203	58,759	5,121	453,083	12.3	107,438
Other private dwellings . . .	126,385	4.0	56,369	18,549	22,963	97,881	2.6	—28,504
Total private dwellings . . .	3,155,340	98.9	2,428,912	755,196	486,445	3,670,553	99.3	515,213
Non-private dwellings(c) . . .	33,917	1.1	10,662	7,734	5,610	24,006	0.7	—9,911
Total occupied dwellings . . .	3,189,257	100.0	2,439,574	762,930	492,055	3,694,559	100.0	505,302

(a) Census, 30 June 1971 only. (b) Villa units were not separately identified at the 1966 Census. (c) Details of the number of each of the types of non-private dwellings are available on request.

Minus sign (—) denotes decrease.

OCCUPIED DWELLINGS, BY CLASS: STATES AND TERRITORIES  
CENSUS, 30 JUNE 1971

Class of dwelling	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
Occupied dwellings—									
Private dwellings—									
Private house . . .	1,086,360	854,636	442,985	306,628	247,769	98,749	10,668	32,446	3,080,241
Villa unit . . .	5,995	15,300	1,676	13,430	1,925	647	125	250	39,348
Self-contained flat . . .	225,549	120,857	49,313	16,569	25,473	8,417	2,202	4,703	453,083
Other private dwellings . . .	38,629	19,393	18,626	5,437	9,192	1,784	4,287	533	97,881
Total private dwellings . . .	1,356,533	1,010,186	512,600	342,064	284,359	109,597	17,282	37,932	3,670,553
Non-private dwellings(a) . . .	8,009	5,299	4,645	2,048	2,486	823	510	186	24,006
Total occupied dwellings . . .	1,364,542	1,015,485	517,245	344,112	286,845	110,420	17,792	38,118	3,694,559

(a) Details of the number of each of the types of non-private dwellings are available on request.

## Population according to class of dwelling, etc. (1966 and 1971)

INMATES BY CLASS OF DWELLING: NUMBERS AND PERCENTAGE DISTRIBUTION,  
URBAN AND RURAL(a), AUSTRALIA, CENSUSES, 1966 AND 1971

	Census, 30 June 1966		Census, 30 June 1971				Proportion of total population	Inter-censal increase or decrease
	Total	Proportion of total population	Major urban	Other urban	Rural	Total		
Persons enumerated in—								
Private dwellings—								
Private house . . .	9,836,987	84.8	6,877,496	2,312,620	1,651,101	10,841,217	85.0	1,004,230
Villa unit . . .	(b)	(b)	68,118	8,431	5,690	82,239	0.6	n.a.
Self-contained flat . . .	834,179	7.2	874,268	137,780	13,173	1,025,221	8.0	191,042
Other private dwellings . . .	284,084	2.4	97,339	44,655	64,715	206,709	1.6	—77,375
Total private dwellings . . .	10,955,250	94.4	7,917,221	2,503,486	1,734,679	12,155,386	95.3	1,200,136
Non-private dwellings . . .	594,081	5.1	308,759	181,140	86,130	576,029	4.5	—18,052
Total . . .	11,549,331	99.5	8,225,980	2,684,626	1,820,809	12,731,415	99.8	1,182,084
Persons not enumerated in dwellings—								
Campers out(c) . . .	30,478	0.3	795	2,050	4,155	7,000	0.1	—23,478
Migratory(d) . . .	19,688	0.2				17,223	0.1	—2,465
Total population . . .	11,599,497	100.0	8,226,775	2,686,676	1,824,964	12,755,638	100.0	1,156,141

(a) Census, 30 June 1971 only. (b) Villa units were not separately identified at the 1966 Census. (c) Comprises persons living temporarily (e.g. on holidays) in tents, caravans or house-boats, or who were 'camped out' on Census night. (d) Comprises persons who on Census night were travelling on board ships in Australian waters, or ships which had left an Australian port prior to Census night with a next port of call in Australia. Also includes persons enumerated on long-distance trains, motor coaches or aircraft.

Minus sign (—) denotes decrease.



**Occupied private dwellings**

The tables on pages 194-7 show occupied private houses and self-contained flats classified according to various characteristics and facilities.

**Nature of occupancy (1966 and 1971)**

**OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS BY NATURE OF  
OCCUPANCY: AUSTRALIA, CENSUSES, 1966 AND 1971**

Nature of occupancy	Private houses				Self-contained flats			
	Census, 30 June 1966		Census, 30 June 1971		Census, 30 June 1966		Census, 30 June 1971	
	Total	Percent- age of private houses	Total	Percent- age of private houses	Total	Percent- age of flats	Total	Percent- age of flats
Owner or purchaser by instal- ments . . . . .	2,124,004	79.2	2,334,391	75.8	72,713	21.0	91,454	20.2
Tenant of government . . . . .	133,104	5.0	164,284	5.3	27,348	7.9	34,111	7.5
Tenant of employer . . . . .	a 361,671	(a)13.5	85,202	2.8	a 237,488	(a)68.7	7,538	1.7
Other tenant . . . . .			343,303	11.1			296,607	65.5
Other methods of occupancy . . . . .	48,446	1.8	99,027	3.2	5,645	1.6	9,651	2.1
Not stated . . . . .	16,085	0.6	54,034	1.8	2,451	0.7	13,722	3.0
<b>Total</b> . . . . .	<b>2,683,310</b>	<b>100.0</b>	<b>3,080,241</b>	<b>100.0</b>	<b>345,645</b>	<b>100.0</b>	<b>453,083</b>	<b>100.0</b>

(a) 'Tenant of employer' and 'other Tenant' were not separately identified at the 1966 Census.

**Material of outer walls (1966 and 1971)**

**OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS, BY MATERIAL OF OUTER  
WALLS: AUSTRALIA, CENSUSES, 1966 AND 1971**

Material of outer walls	Census, 30 June 1966				Census, 30 June 1971			
	Private house	Percent- age of total	Self- contained flat	Percent- age of total	Private house	Percent- age of total	Self- contained flat	Percent- age of total
Brick . . . . .	674,335	25.1	224,962	65.1	882,847	28.7	325,952	71.9
Brick veneer . . . . .	262,160	9.8	16,250	4.7	391,545	12.7	24,212	5.3
Stone . . . . .	68,919	2.6	6,515	1.9	69,726	2.3	6,362	1.4
Concrete . . . . .	68,187	2.5	17,678	5.1	68,922	2.2	25,405	5.6
Timber . . . . .	1,076,967	40.1	50,276	14.5	1,121,288	36.4	45,106	10.0
Metal . . . . .	28,770	1.1	1,171	0.3	39,042	1.3	1,206	0.3
Fibro-cement . . . . .	495,718	18.5	28,577	8.3	499,019	16.2	24,410	5.4
Other . . . . .	8,254	0.3	216	0.1	7,852	0.3	430	0.1
<b>Total</b> . . . . .	<b>2,683,310</b>	<b>100.0</b>	<b>345,645</b>	<b>100.0</b>	<b>3,080,241</b>	<b>100.0</b>	<b>453,083</b>	<b>100.0</b>

## Number of rooms (1966 and 1971)

OCCUPIED PRIVATE DWELLINGS BY NUMBER OF ROOMS AND CLASS OF DWELLING  
AUSTRALIA, CENSUSES 1966 AND 1971

Number of rooms per dwelling(a)	Class of dwelling				Total private dwellings
	Private house	Villa unit	Self-contained flat	Other	
CENSUS, 30 JUNE 1966					
1 . . . . .	2,235	(b)	7,804	41,954	51,993
2 . . . . .	15,107	(b)	50,859	37,424	103,390
3 . . . . .	63,041	(b)	93,593	23,189	179,823
4 . . . . .	369,582	(b)	113,632	11,081	494,295
5 . . . . .	1,055,840	(b)	50,906	6,090	1,112,836
6 . . . . .	697,273	(b)	18,746	3,420	719,439
7 . . . . .	305,797	(b)	6,104	1,706	313,607
8 and over . . . . .	174,435	(b)	4,001	1,521	179,957
Total private dwellings . . .	2,683,310	(b)	345,645	126,385	3,155,340
Average number of rooms per dwelling	5.5	n.a.	3.7	2.4	5.2

CENSUS, 30 JUNE 1971					
1 . . . . .	6,087	1,269	19,100	43,771	70,227
2 . . . . .	23,957	4,791	79,502	27,173	135,423
3 . . . . .	95,603	10,437	134,006	13,586	253,632
4 . . . . .	460,652	16,665	152,403	5,189	634,909
5 . . . . .	1,333,989	4,248	46,715	2,735	1,387,687
6 . . . . .	726,508	1,214	13,240	1,816	742,778
7 . . . . .	276,212	326	3,978	968	281,484
8 and over . . . . .	157,233	398	4,139	2,643	164,413
Total private dwellings . . .	3,080,241	39,348	453,083	97,881	3,670,553
Average number of rooms per dwelling	5.3	3.6	3.5	2.2	5.0

(a) Bathrooms, toilets, pantries, laundries, storerooms, halls and rooms used only for business purposes are excluded, but permanently enclosed sleep-outs are included. A combined purpose room such as a living-dining or kitchen-dining room is counted as only one room. (b) Villa units were not separately identified at the 1966 Census.

OCCUPIED PRIVATE DWELLINGS BY NUMBER OF BEDROOMS AND CLASS OF DWELLING  
AUSTRALIA, CENSUS, 30 JUNE 1971

Number of bedrooms per dwelling	Class of dwelling				Total private dwellings
	Private house	Villa unit	Self-contained flat	Other	
No bedroom . . . . .	9,365	2,162	26,000	39,716	77,243
1 . . . . .	83,586	10,106	152,125	29,371	275,188
2 . . . . .	718,696	21,761	217,283	9,544	967,284
3 . . . . .	1,777,575	4,108	41,526	3,023	1,826,232
4 . . . . .	392,092	477	5,113	1,155	398,837
5 and over . . . . .	77,400	302	2,507	2,304	82,513
Not stated . . . . .	21,527	432	8,529	12,768	43,256
Total private dwellings . . .	3,080,241	39,348	453,083	97,881	3,670,553
Average number of bedrooms per dwelling . . . . .	2.9	1.8	1.6	0.8	2.6

## Occupied self-contained flats

## NUMBER OF OCCUPIED SELF-CONTAINED FLATS AND NUMBER OF INMATES BY NUMBER OF FLATS IN BLOCK: STATES AND TERRITORIES, CENSUS 30 JUNE 1971

State or Territory	Number of flats in block						Total
	1(a)	2	3-8	9-16	17-32	33+	
New South Wales—							
Number of self-contained flats	19,919	26,794	80,749	55,755	26,399	15,933	225,549
Number of inmates	51,781	69,374	191,739	123,699	53,615	30,140	520,348
Victoria—							
Number of self-contained flats	13,524	12,028	42,118	32,671	12,159	8,358	120,858
Number of inmates	34,243	28,837	97,435	66,780	22,787	20,979	271,061
Queensland—							
Number of self-contained flats	3,775	10,546	29,494	3,402	1,112	984	49,313
Number of inmates	9,388	27,477	65,355	6,576	2,142	1,819	112,757
South Australia—							
Number of self-contained flats	3,234	2,703	6,939	2,035	869	789	16,569
Number of inmates	6,866	6,109	14,385	3,944	1,592	1,366	34,262
Western Australia—							
Number of self-contained flats	1,541	1,208	5,780	5,390	4,956	6,598	25,473
Number of inmates	3,423	2,676	11,952	11,940	10,961	13,257	54,209
Tasmania—							
Number of self-contained flats	1,609	2,431	3,207	714	223	233	8,417
Number of inmates	3,692	5,872	6,523	1,171	464	439	18,161
Northern Territory—							
Number of self-contained flats	244	222	985	241	379	131	2,202
Number of inmates	592	592	2,379	549	893	305	5,310
Australian Capital Territory—							
Number of self-contained flats	589	534	1,067	1,008	670	835	4,703
Number of inmates	1,196	1,267	2,222	2,035	1,294	1,099	9,113
Australia—							
Number of self-contained flats	44,435	56,466	170,338	101,216	46,767	33,861	453,083
Number of inmates	111,181	142,204	391,990	216,694	93,748	69,404	1,025,221

(a) Represents flats that are not part of a multi-flat unit.

## Facilities (1966 and 1971)

OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS BY GAS ELECTRICITY AND TELEVISION FACILITIES: AUSTRALIA  
CENSUSES, 1966 AND 1971

Facilities	Census, 30 June 1966		Census, 30 June 1971	
	Private house	Self-contained flat	Private house	Self-contained flat
With gas only . . . . .	5,193	486	3,078	196
With electricity only . . . . .	1,506,229	128,094	1,833,684	226,114
With gas and electricity . . . . .	1,139,949	214,897	1,215,709	219,164
Neither gas nor electricity . . . . .	24,109	272	9,440	207
Not stated . . . . .	7,830	1,896	18,330	7,402
Total . . . . .	2,683,310	345,645	3,080,241	453,083
With television . . . . .	2,154,520	235,106	2,488,764	305,046
Without television . . . . .	528,790	110,539	236,386	70,071
Not stated . . . . .			355,091	77,966
Total . . . . .	2,683,310	345,645	3,080,241	453,083

NOTE. Dwellings for which electricity was not stated but which had television have been classified as having electricity and therefore included as such in this table.



**OCCUPIED PRIVATE DWELLINGS BY BATHROOM AND KITCHEN FACILITIES AND CLASS OF DWELLING: AUSTRALIA, CENSUS, 30 JUNE 1966**

Facilities	Class of dwelling				Total	Proportion of total
	Private house	Villa unit	Self-contained flat	Other		
Bathroom only . . .	7,847	325	1,235	7,960	17,367	0.5
Kitchen only . . .	14,327	344	1,326	10,447	26,444	0.7
Bathroom and kitchen . . .	3,036,856	38,200	443,530	61,543	3,580,129	97.5
Neither bathroom nor kitchen	3,930	130	..	8,925	12,985	0.4
Not stated . . .	17,281	349	6,992	9,006	33,628	0.9
<b>Total . . .</b>	<b>3,080,241</b>	<b>39,348</b>	<b>453,083</b>	<b>97,881</b>	<b>3,670,553</b>	<b>100.0</b>

**OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS BY NUMBER OF MOTOR VEHICLES: URBAN AND RURAL(a), AUSTRALIA, CENSUSES, 1966 AND 1971**

Number of motor vehicles	Census 30 June 1966		Census 30 June 1971							
	Houses	Flats	Major urban		Other urban		Rural		Total	
			Houses	Flats	Houses	Flats	Houses	Flats	Houses	Flats
No vehicles . . .	557,392	131,051	367,305	139,441	110,934	15,386	41,940	976	520,179	155,803
1 . . .	1,400,206	164,948	980,979	194,127	365,315	32,923	198,269	2,815	1,544,563	229,865
2 . . .	517,566	27,466	461,605	35,472	151,463	6,832	131,455	845	744,523	43,149
3 . . .	114,800	4,083	86,338	4,338	27,766	1,033	50,652	197	164,756	5,568
4 or more . . .	38,838	1,261	20,949	2,071	8,430	541	28,100	103	57,479	2,715
Not stated . . .	54,508	16,836	32,033	13,754	10,295	2,044	6,413	185	48,741	15,983
<b>Total . . .</b>	<b>2,683,310</b>	<b>345,645</b>	<b>1,949,209</b>	<b>389,203</b>	<b>674,203</b>	<b>58,759</b>	<b>456,829</b>	<b>5,121</b>	<b>3,080,241</b>	<b>453,083</b>

(a) Census, 30 June 1971 only.

**OCCUPIED PRIVATE DWELLINGS BY METHOD OF SEWAGE DISPOSAL AND CLASS OF DWELLING: AUSTRALIA, CENSUS, 30 JUNE 1971**

Method of sewage disposal	Class of dwelling				Total	Proportion of total
	Private house	Villa unit	Self-contained flat	Other		
Mains sewer . . .	1,955,150	34,196	402,237	53,250	2,444,833	66.6
Separate system . . .	786,471	3,947	35,922	12,340	838,680	22.8
Sanitary pan . . .	227,984	582	5,342	7,370	241,278	6.6
Other . . .	90,300	238	827	14,272	105,637	2.9
Not stated . . .	20,336	385	8,755	10,649	40,125	1.1
<b>Total . . .</b>	<b>3,080,241</b>	<b>39,348</b>	<b>453,083</b>	<b>97,881</b>	<b>3,670,553</b>	<b>100.0</b>

**Unoccupied dwellings (1971)**

An unoccupied dwelling is defined as a structure built specifically for private living purposes and which is habitable, though unoccupied at the time of the Census. The total number of unoccupied dwellings shown for any area does not represent the number of vacant dwellings available for sale or renting.

**UNOCCUPIED PRIVATE DWELLINGS BY REASON UNOCCUPIED: NUMBERS  
AND PERCENTAGE DISTRIBUTION URBAN AND RURAL, AUSTRALIA  
CENSUS, 30 JUNE 1971**

<i>Reason unoccupied</i>	<i>Major urban</i>		<i>Other urban</i>		<i>Rural</i>		<i>Total</i>	
	<i>Number</i>	<i>Percentage of total</i>	<i>Number</i>	<i>Percentage of total</i>	<i>Number</i>	<i>Percentage of total</i>	<i>Number</i>	<i>Percentage of total</i>
For sale . . .	16,480	4.9	6,088	1.8	3,416	1.0	25,984	7.7
To let . . .	23,027	6.8	12,154	3.6	6,260	1.8	41,441	12.2
Newly built . . .	14,417	4.3	3,820	1.1	1,988	0.6	20,225	6.0
Vacant for repair . . .	7,049	2.1	2,925	0.9	3,141	0.9	13,115	3.9
Holiday home . . .	13,822	4.1	37,403	11.0	41,257	12.2	92,482	27.3
Condemned . . .	4,555	1.3	2,268	0.7	5,292	1.6	12,115	3.6
Temporarily vacant . . .	50,370	14.9	24,084	7.1	18,389	5.4	92,843	27.4
Other reasons . . .	8,427	2.5	3,675	1.1	19,474	5.7	31,576	9.3
Not stated . . .	4,584	1.4	1,766	0.5	2,926	0.9	9,276	2.7
<b>Total . . .</b>	<b>142,731</b>	<b>42.1</b>	<b>94,183</b>	<b>27.8</b>	<b>102,143</b>	<b>30.1</b>	<b>339,057</b>	<b>100.0</b>

**UNOCCUPIED PRIVATE DWELLINGS BY REASON UNOCCUPIED AND CLASS OF  
DWELLING: AUSTRALIA, CENSUS, 30 JUNE 1971**

<i>Reason unoccupied</i>	<i>Class of dwelling</i>				<i>Total</i>	<i>Percentage of total</i>
	<i>Private house</i>	<i>Villa unit</i>	<i>Self-contained flat</i>	<i>Other</i>		
For sale . . .	20,609	1,302	3,952	121	25,984	7.7
To let . . .	18,078	552	19,855	2,956	41,441	12.2
Newly built . . .	13,354	1,129	5,570	172	20,225	6.0
Vacant for repair . . .	11,419	48	1,453	195	13,115	3.9
Holiday home . . .	83,654	703	6,537	1,588	92,482	27.3
Condemned . . .	11,485	12	508	110	12,115	3.6
Temporarily vacant . . .	71,909	1,963	16,176	2,795	92,843	27.4
Other reasons . . .	28,956	203	1,839	578	31,576	9.3
Not stated . . .	7,039	86	1,737	414	9,276	2.7
<b>Total . . .</b>	<b>266,503</b>	<b>5,998</b>	<b>57,627</b>	<b>8,929</b>	<b>339,057</b>	<b>100.0</b>

## Building

### Statistics of building approved

Statistics of building approvals have been compiled since the year 1953-54 from (a) permits issued by local government authorities in the areas subject to building control by these authorities, and (b) contracts let or work commenced and day labour projects authorised by government authorities. *They relate only to approvals for buildings as distinct from the construction of roads, railways, bridges, earthworks, water storages, etc.* Values shown represent the estimated cost when completed (excluding cost of land) of new buildings and alterations and additions to existing buildings. Before 1 July 1966 additions of \$10,000 and over were included with new buildings in all States except New South Wales, where they were included in 'alterations and additions'. From 1 July 1966 alterations and/or additions of \$10,000 and over are included with new buildings in all States.

### Statistics of building commenced, completed and under construction

These relate to building by private contractors, government authorities and owner-builders. The following outlines the scope of the statistics; (a) *only the erection of new buildings as distinct from the construction of roads, railways, bridges, earthworks, water storages, etc., is covered*; (b) before 1 July 1966 major new additions to existing buildings in all States and major alterations in New South Wales were included with new buildings, while from 1 July 1966 alterations and/or additions of \$10,000 and over are included with new buildings in all States; (c) minor additions, alterations,

renovations and repairs are excluded because of the difficulty of obtaining details of this work; (d) temporary dwellings, sheds, huts, etc., are excluded; (e) figures for houses exclude flats and dwellings attached to other new buildings (the value of dwellings attached to other new buildings is included with the value of buildings to which they are attached); figures for flats include 'home units'; (f) details obtained from government authorities and building contractors refer to all areas, whereas details for owner-builders cover only areas subject to building control by local government authorities.

The following definitions of terms used in this section are necessary for interpretation of the data presented.

*Private or government ownership.* A building is classified as 'private' or 'government' according to ownership at date of commencement. Thus 'government' includes buildings erected for Commonwealth and State Governments, semi-government and local government authorities, either by contractor or by day-labour, whether these buildings are for their own use or for rental or sale after completion. Houses erected for particular persons under government-sponsored home building schemes or with government financial assistance are classified as 'private'.

*Owner-built.* An 'owner-built' house is one actually erected or being erected by the owner or under the owner's direction without the services of a contractor who is responsible for the whole job.

*Contract-built.* Includes the operations of all building contractors, and government authorities which undertake the erection of new buildings with day labour.

*Commenced.* A building is regarded as having been commenced when work on foundations has begun. Owing to the difficulty of defining the exact point that this represents in building operations, classifications made by informants may not be entirely uniform.

*Completed.* A building is regarded as having been completed when the contractor has fulfilled the terms of the contract. As with commencements, the classifications made may not be entirely uniform.

*Under construction.* A building is regarded as being under construction if it has been commenced but not completed, whether or not work on the building is actively proceeding.

*Values.* All values shown exclude the value of land and represent the estimated value of buildings on completion.

*Values of work done.* The values of work done during the period represent the estimated value of work actually carried out on buildings during the period. For any building the sum of these values obtained during its construction equals the value of the building on completion. Data relating to the value of work done on owner-built houses are not collected. However, the figures shown for the value of work done include a component relating to owner-built houses calculated on the basis of the figures collected for the value of owner-built houses commenced, completed and under construction.

*The values of work yet to be done on buildings under construction at the end of period* are the differences between the estimated total value of work done at the end of period and the estimated final value of the building on completion. They therefore represent the values of work which will be carried out in subsequent quarters on buildings already under construction.

*Type of building.* Classification is according to the function a building is intended to serve. A building which is ancillary to other buildings or forms part of a group of related buildings is classified according to the function of the group as a whole.

*Persons working.* Figures relate to persons working on the jobs of contractors who undertake the erection of new buildings and of government authorities which erect new buildings on their own account. They include persons working on alterations, additions, repairs and maintenance when these jobs are undertaken by such contractors and authorities. Contractors are asked to give details of all persons working on their jobs on a specified day, including working principals, men working as or for sub-contractors and men temporarily laid off on account of weather. Because of the intermittent employment of various types of sub-contractors on any particular job, it is sometimes difficult for contractors and authorities to provide precise particulars of the number of sub-contractors and the number of employees of sub-contractors working on their jobs on the specified day. This factor may cause some estimation by persons completing returns and some degree of understatement in figures shown in tables. On the other hand, because of frequent movement between jobs of some types of tradesmen (such as electricians) who may work on several jobs on the one day, a small element of duplication may occur. The figures exclude persons working on owner-built houses, and employees of builders who undertake only alterations, additions, repairs and maintenance.



New houses approved, commenced, completed and under construction

The next table provides a summary for 1971-72 of the number of new houses approved, commenced, completed and under construction in each State and Territory. For a graph showing the number of new houses commenced, completed and under construction for the period 1962-63 to 1971-72 see plate 23, below.

NEW HOUSES: NUMBER, STATES AND TERRITORIES, 1971-72

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved . . . . .	29,928	28,418	19,728	8,350	12,805	2,484	932	3,625	106,270
Commenced . . . . .	29,557	27,600	18,262	8,884	12,578	2,231	1,372	3,720	104,204
Completed . . . . .	30,031	25,627	17,476	9,061	13,287	2,261	1,491	3,719	102,953
Under construction at end of year . . . . .	12,169	11,960	4,925	3,940	4,441	1,337	792	1,975	41,539

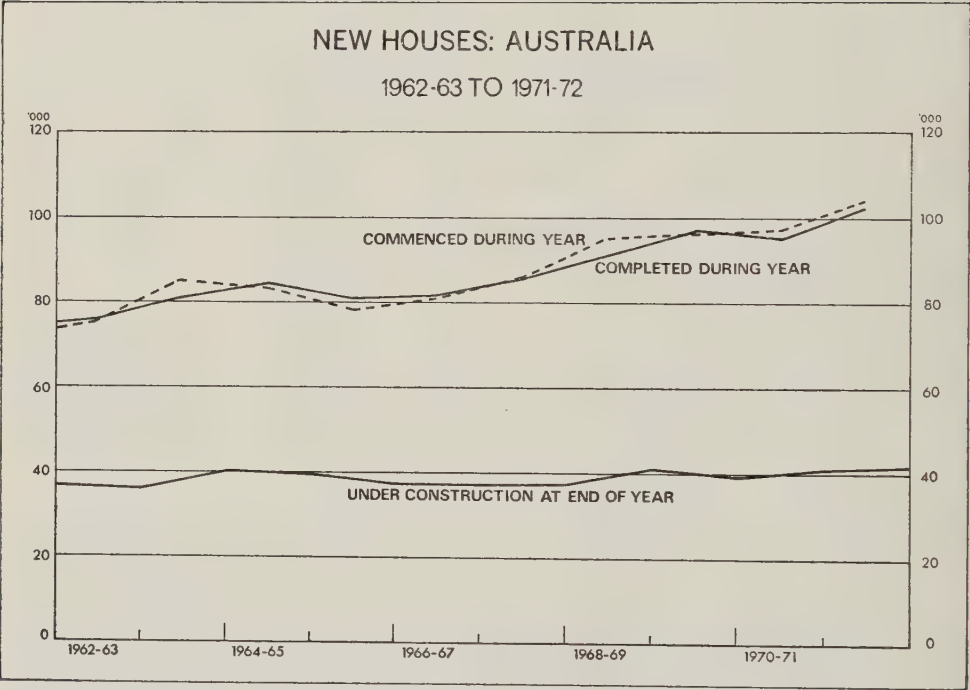


PLATE 23

The following table shows the number of new houses approved in each State or Territory, according to private and government ownership, during the years 1967-68 to 1971-72.

**NEW HOUSES APPROVED, BY OWNERSHIP: NUMBER, STATES AND TERRITORIES  
1967-68 TO 1971-72**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
PRIVATE									
1967-68 . . .	26,478	20,998	11,958	4,925	10,030	2,393	131	1,374	78,287
1968-69 . . .	28,102	22,357	12,443	5,704	12,912	2,206	224	1,889	85,837
1969-70 . . .	27,496	23,538	13,371	6,335	12,280	2,123	599	2,236	87,978
1970-71 . . .	27,066	23,213	14,332	6,594	9,255	1,969	234	2,673	85,336
1971-72 . . .	27,535	26,908	18,213	7,245	10,833	1,996	298	2,748	95,776
GOVERNMENT									
1967-68 . . .	2,873	1,320	1,494	942	1,889	916	676	590	10,700
1968-69 . . .	4,226	1,969	1,856	2,082	1,567	488	633	1,009	13,830
1969-70 . . .	4,146	2,050	1,742	1,675	1,685	532	907	933	13,670
1970-71 . . .	4,109	1,466	2,049	2,151	2,570	612	889	972	14,818
1971-72 . . .	2,393	1,510	1,515	1,105	1,972	488	634	877	10,494
TOTAL									
1967-68 . . .	29,351	22,318	13,452	5,867	11,919	3,309	807	1,964	88,987
1968-69 . . .	32,328	24,326	14,299	7,786	14,479	2,694	857	2,898	99,667
1969-70 . . .	31,642	25,588	15,113	8,010	13,965	2,655	1,506	3,169	101,648
1970-71 . . .	31,175	24,679	16,381	8,745	11,825	2,581	1,123	3,645	100,154
1971-72 . . .	29,928	28,418	19,728	8,350	12,805	2,484	932	3,625	106,270

The number of *new houses commenced* in each State and Territory by *contractors and owner-builders* during the years 1967-68 to 1971-72 is shown in the following table.

**NEW HOUSES COMMENCED, CONTRACT-BUILT OR OWNER-BUILT  
NUMBER, STATES AND TERRITORIES, 1967-68 TO 1971-72**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
CONTRACT-BUILT(a)									
1967-68 . . .	22,530	18,858	11,913	6,311	10,282	2,181	708	2,326	75,109
1968-69 . . .	26,465	20,334	12,930	6,881	12,464	1,747	820	2,784	84,425
1969-70 . . .	26,155	21,352	13,373	7,542	11,716	1,877	754	3,128	85,897
1970-71 . . .	24,431	21,538	14,503	8,444	11,047	1,883	949	3,517	86,312
1971-72 . . .	23,879	24,130	16,958	8,512	11,778	1,521	1,162	3,600	91,540
OWNER-BUILT									
1967-68 . . .	3,675	3,050	1,375	441	1,190	961	55	63	10,810
1968-69 . . .	3,905	3,246	1,250	331	1,384	833	103	87	11,139
1969-70 . . .	4,078	3,223	1,093	398	1,283	805	96	48	11,024
1970-71 . . .	5,017	3,233	983	325	996	663	122	156	11,495
1971-72 . . .	5,678	3,470	1,304	372	800	710	210	120	12,664
TOTAL									
1967-68 . . .	26,205	21,908	13,288	6,752	11,472	3,142	763	2,389	85,919
1968-69 . . .	30,370	23,580	14,180	7,212	13,848	2,580	923	2,871	95,564
1969-70 . . .	30,233	24,575	14,466	7,940	12,999	2,682	850	3,176	96,921
1970-71 . . .	29,448	24,771	15,486	8,769	12,043	2,546	1,071	3,673	97,807
1971-72 . . .	29,557	27,600	18,262	8,884	12,578	2,231	1,372	3,720	104,204

(a) Includes operations of government authorities.

The following table shows the number of *new houses completed* in each State and Territory by *contractors and owner-builders* during the years 1967-68 to 1971-72.

**NEW HOUSES COMPLETED, CONTRACT-BUILT OR OWNER-BUILT  
NUMBER, STATES AND TERRITORIES, 1967-68 TO 1971-72**

<i>Year</i>		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>CONTRACT-BUILT(a)</b>										
1967-68	. . .	23,111	18,648	11,720	6,998	8,810	2,442	644	2,331	74,704
1968-69	. . .	24,360	19,390	12,857	6,574	11,616	1,905	674	2,436	79,812
1969-70	. . .	25,582	20,988	13,510	7,128	12,435	1,962	885	3,120	85,610
1970-71	. . .	24,349	21,718	13,685	7,966	10,862	1,719	761	3,099	84,159
1971-72	. . .	24,647	22,488	16,294	8,740	12,303	1,664	1,338	3,587	91,061
<b>OWNER-BUILT</b>										
1967-68	. . .	4,159	2,944	1,378	446	1,048	889	55	133	11,052
1968-69	. . .	4,434	3,341	1,411	380	1,224	799	66	79	11,734
1969-70	. . .	4,097	3,714	1,189	376	1,498	899	69	72	11,914
1970-71	. . .	4,702	3,461	1,000	342	1,059	544	94	70	11,272
1971-72	. . .	5,384	3,139	1,182	321	984	597	153	132	11,892

(a) Includes operations of government authorities.

The number of *new houses completed* in each State and Territory during the years 1967-68 to 1971-72, according to *private and government ownership*, is shown in the following table.

**NEW HOUSES COMPLETED, BY OWNERSHIP: NUMBER, STATES AND  
TERRITORIES, 1967-68 TO 1971-72**

<i>Year</i>		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>PRIVATE</b>										
1967-68	. . .	23,126	20,276	11,381	5,141	8,533	2,594	134	1,557	72,742
1968-69	. . .	25,503	21,334	12,548	5,110	11,007	1,969	156	1,612	79,239
1969-70	. . .	25,733	23,047	12,837	5,902	12,384	2,178	187	2,044	84,312
1970-71	. . .	24,931	23,110	12,879	6,353	9,648	1,636	244	2,425	81,226
1971-72	. . .	26,185	24,052	15,739	6,956	11,167	1,795	627	2,757	89,278
<b>GOVERNMENT</b>										
1967-68	. . .	4,144	1,316	1,717	2,303	1,325	737	565	907	13,014
1968-69	. . .	3,291	1,397	1,720	1,844	1,833	735	584	903	12,307
1969-70	. . .	3,946	1,655	1,862	1,602	1,549	683	767	1,148	13,212
1970-71	. . .	4,120	2,069	1,806	1,955	2,273	627	611	744	14,205
1971-72	. . .	3,846	1,575	1,737	2,105	2,120	466	864	962	13,675
<b>TOTAL</b>										
1967-68	. . .	27,270	21,592	13,098	7,444	9,858	3,331	699	2,464	85,756
1968-69	. . .	28,794	22,731	14,268	6,954	12,840	2,704	740	2,515	91,546
1969-70	. . .	29,679	24,702	14,699	7,504	13,933	2,861	954	3,192	97,524
1970-71	. . .	29,051	25,179	14,685	8,308	11,921	2,263	855	3,169	95,431
1971-72	. . .	30,031	25,627	17,476	9,061	13,287	2,261	1,491	3,719	102,953



The following tables show the number of *new houses completed* in each State and Territory during 1971-72 and in Australia during the years 1967-68 to 1971-72, classified according to the *material of their outer walls*.

**NEW HOUSES COMPLETED, BY MATERIAL OF OUTER WALLS: NUMBER  
STATES AND TERRITORIES, 1971-72**

<i>Material of outer walls</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Brick, brick veneer, concrete and stone . . . . .	21,357	23,221	9,348	8,199	11,893	1,781	970	3,712	80,481
Wood (weatherboard, etc.) . . . . .	2,177	738	5,009	23	28	196	26	7	8,204
Asbestos-cement . . . . .	6,280	1,649	2,559	806	1,241	103	447	..	13,085
Other . . . . .	217	19	560	33	125	181	48	..	1,183
<b>Total . . . . .</b>	<b>30,031</b>	<b>25,627</b>	<b>17,476</b>	<b>9,061</b>	<b>13,287</b>	<b>2,261</b>	<b>1,491</b>	<b>3,719</b>	<b>102,953</b>

**NEW HOUSES COMPLETED, BY MATERIAL OF OUTER WALLS: NUMBER  
AUSTRALIA, 1967-68 TO 1971-72**

<i>Material of outer walls</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Brick, brick veneer, concrete and stone . . . . .	57,506	64,696	71,816	72,527	80,481
Wood (weatherboard, etc.) . . . . .	11,633	10,554	9,967	8,237	8,204
Asbestos-cement . . . . .	15,820	15,525	14,919	13,763	13,085
Other . . . . .	797	771	822	904	1,183
<b>Total . . . . .</b>	<b>85,756</b>	<b>91,546</b>	<b>97,524</b>	<b>95,431</b>	<b>102,953</b>

The number of *new houses under construction* at the end of each year 1967-68 to 1971-72 in each State and Territory is shown in the following table.

**NEW HOUSES UNDER CONSTRUCTION: NUMBER, STATES AND TERRITORIES  
1967-68 TO 1971-72**

<i>At end of year—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1967-68 . . . . .	11,499	10,713	3,650	3,151	5,123	1,538	621	1,201	37,496
1968-69 . . . . .	13,075	11,290	3,562	3,366	6,104	1,372	804	1,547	41,120
1969-70 . . . . .	13,025	10,960	3,329	3,713	5,115	1,163	692	1,522	39,519
1970-71 . . . . .	12,959	10,368	4,134	4,142	5,177	1,393	888	2,001	41,062
1971-72 . . . . .	12,169	11,960	4,925	3,940	4,441	1,337	792	1,975	41,539

**New flats approved, commenced, completed and under construction**

The following table shows the number of new flats approved, commenced, completed and under construction for the year 1971-72. For a graph showing the number of new flats commenced, completed and under construction for the period 1962-63 to 1971-72 *see plate 24, page 204*.

**NEW FLATS: NUMBER, STATES AND TERRITORIES, 1971-72**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Approved . . . . .	19,528	10,303	6,122	4,675	1,255	909	639	545	43,976
Commenced . . . . .	19,516	10,335	5,324	4,405	1,340	860	634	412	42,826
Completed . . . . .	17,989	10,091	4,495	4,184	1,595	767	488	192	39,801
Under construction at end of year . . . . .	12,739	6,400	2,204	2,541	834	605	397	494	26,214

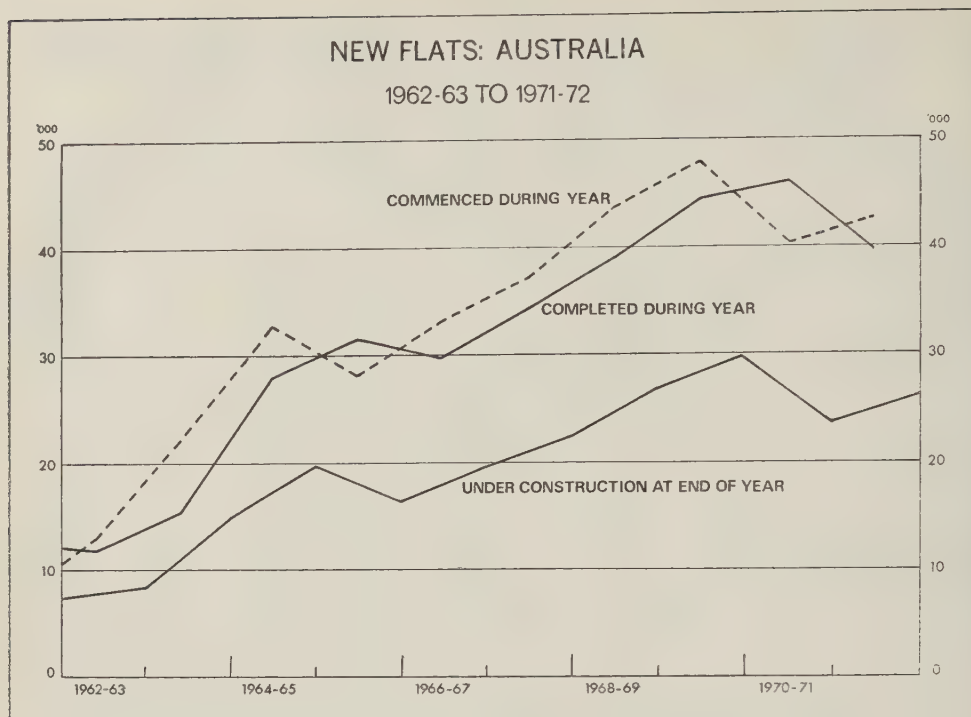


PLATE 24

The following table shows the number of *new flats approved* in each State or Territory during the years 1967-68 to 1971-72 according to *private and government ownership*.

**NEW FLATS APPROVED, BY OWNERSHIP  
NUMBER, STATES AND TERRITORIES, 1967-68 TO 1971-72**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>PRIVATE</b>									
1967-68	17,028	14,894	2,853	1,835	3,094	346	475	36	40,561
1968-69	21,258	13,134	2,474	2,419	5,493	432	381	299	45,890
1969-70	22,228	13,437	2,807	4,422	5,349	723	826	293	50,085
1970-71	16,742	8,612	4,409	4,993	1,281	548	179	246	37,010
1971-72	18,660	9,085	5,899	4,579	1,120	642	565	347	40,897
<b>GOVERNMENT</b>									
1967-68	1,030	1,288	6	17	106	79	54	..	2,580
1968-69	972	939	14	172	699	6	102	..	2,904
1969-70	1,089	1,344	..	74	1,323	58	202	108	4,198
1970-71	1,856	1,059	29	176	612	62	68	..	3,862
1971-72	868	1,218	223	96	135	267	74	198	3,079
<b>TOTAL</b>									
1967-68	18,058	16,182	2,859	1,852	3,200	425	529	36	43,141
1968-69	22,230	14,073	2,488	2,591	6,192	438	483	299	48,794
1969-70	23,317	14,781	2,807	4,496	6,672	781	1,028	401	54,283
1970-71	18,598	9,671	4,438	5,169	1,893	610	247	246	40,872
1971-72	19,528	10,303	6,122	4,675	1,255	909	639	545	43,976

The number of *new flats commenced* in each State or Territory during the years 1967-68 to 1971-72 is shown in the following table.

**NEW FLATS COMMENCED: NUMBER, STATES AND TERRITORIES, 1967-68 TO 1971-72**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68 . . .	14,369	14,399	2,997	1,561	3,172	367	305	28	37,198
1968-69 . . .	18,416	14,117	2,586	2,100	5,366	364	488	301	43,738
1969-70 . . .	21,471	13,505	2,438	3,526	5,839	641	350	288	48,058
1970-71 . . .	18,912	10,312	3,639	4,282	1,759	747	435	310	40,396
1971-72 . . .	19,516	10,335	5,324	4,405	1,340	860	634	412	42,826

The following table shows the number of *new flats completed* in each State and Territory during the years 1967-68 to 1971-72, according to *private and government ownership*.

**NEW FLATS COMPLETED, BY OWNERSHIP  
NUMBER, STATES AND TERRITORIES, 1967-68 TO 1971-72**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
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**PRIVATE**

1967-68 . . .	12,770	11,635	3,161	1,350	2,382	219	163	167	31,847
1968-69 . . .	15,231	12,921	2,843	1,711	3,337	352	254	74	36,723
1969-70 . . .	17,901	12,672	2,434	2,612	4,915	490	338	259	41,621
1970-71 . . .	19,461	11,071	3,159	3,755	3,608	583	267	333	42,237
1971-72 . . .	16,453	8,821	4,482	4,114	992	598	378	192	36,030

**GOVERNMENT**

1967-68 . . .	1,338	1,051	20	23	10	73	48	4	2,567
1968-69 . . .	1,131	854	20	30	154	14	215	..	2,418
1969-70 . . .	873	1,320	2	45	681	12	133	1	3,067
1970-71 . . .	885	1,016	..	245	1,405	84	100	..	3,735
1971-72 . . .	1,536	1,270	13	70	603	169	110	..	3,771

**TOTAL**

1967-68 . . .	14,108	12,686	3,181	1,373	2,392	292	211	171	34,414
1968-69 . . .	16,362	13,775	2,863	1,741	3,491	366	469	74	39,141
1969-70 . . .	18,774	13,992	2,436	2,657	5,596	502	471	260	44,688
1970-71 . . .	20,346	12,087	3,159	4,000	5,013	667	367	333	45,972
1971-72 . . .	17,989	10,091	4,495	4,184	1,595	767	488	192	39,801

The number of *new flats under construction* at the end of each year 1967-68 to 1971-72 in each State and Territory is shown in the table below.

**NEW FLATS UNDER CONSTRUCTION  
NUMBER, STATES AND TERRITORIES, 1967-68 TO 1971-72**

At end of year—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68 . . .	8,630	8,914	1,173	798	2,369	254	398	38	22,574
1968-69 . . .	10,684	9,158	896	1,155	4,237	246	417	267	27,060
1969-70 . . .	13,122	8,399	898	2,036	4,466	384	249	303	29,857
1970-71 . . .	11,384	6,398	1,379	2,344	1,115	482	302	274	23,678
1971-72 . . .	12,739	6,400	2,204	2,541	834	605	397	494	26,214



## Value of new buildings approved, commenced, completed and under construction

The following table summarises, for the years 1967-68 to 1971-72, the values of all new buildings approved, commenced, completed, under construction, the value of work done, and the value of work yet to be done in each State and Territory.

NEW BUILDINGS: VALUE, STATES AND TERRITORIES, 1967-68 TO 1971-72  
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
APPROVED									
1967-68	689,070	516,339	268,894	148,672	240,792	72,018	28,488	44,168	2,008,441
1968-69	823,769	560,671	266,056	145,872	305,594	52,289	28,048	71,256	2,253,555
1969-70	975,091	684,134	306,010	189,052	380,681	59,539	68,434	103,384	2,766,325
1970-71	1,017,043	625,908	373,568	209,354	307,680	68,043	51,295	102,266	2,755,157
1971-72	1,097,749	763,836	411,672	238,940	293,340	70,086	53,507	95,716	3,024,846
COMMENCED									
1967-68	689,372	504,864	280,536	129,004	242,305	63,152	25,696	54,869	1,989,798
1968-69	814,678	575,994	268,821	150,145	297,684	56,200	29,901	65,015	2,258,438
1969-70	975,115	674,588	283,734	181,999	361,594	62,131	44,025	98,638	2,681,824
1970-71	1,104,352	672,037	383,190	217,912	317,880	70,189	57,593	115,726	2,938,879
1971-72	1,180,388	733,418	428,469	226,132	297,701	64,319	67,242	98,994	3,096,663
COMPLETED									
1967-68	638,958	497,370	256,974	138,531	195,403	61,885	20,295	56,268	1,865,684
1968-69	721,504	578,126	271,264	156,712	254,833	56,948	25,926	71,348	2,136,661
1969-70	808,202	629,109	311,079	147,638	303,396	66,452	43,406	73,036	2,382,318
1970-71	946,552	667,966	333,785	200,895	365,012	59,684	34,006	83,139	2,691,039
1971-72	1,138,253	677,381	397,748	215,036	331,440	69,717	71,132	90,367	2,991,074
UNDER CONSTRUCTION AT END OF YEAR									
1967-68	521,357	443,905	176,917	112,356	148,846	52,506	25,205	60,476	1,541,568
1968-69	626,267	451,906	177,913	108,939	194,278	51,896	29,121	54,150	1,694,470
1969-70	813,539	514,808	154,994	145,486	256,543	51,022	29,668	82,615	2,048,675
1970-71	986,280	520,378	211,182	174,376	209,675	63,465	52,971	116,892	2,335,219
1971-72	1,046,784	598,243	252,176	186,408	184,096	61,636	49,487	135,293	2,514,123
VALUE OF WORK DONE DURING YEAR									
1967-68	639,226	525,750	255,345	137,506	212,437	60,058	22,510	61,515	1,914,347
1968-69	762,546	580,374	287,704	144,297	270,012	58,785	27,746	63,886	2,195,350
1969-70	905,973	645,477	306,270	165,540	342,942	68,428	43,557	78,486	2,556,673
1970-71	1,028,476	677,474	345,769	209,716	347,022	65,446	47,446	94,284	2,815,633
1971-72	1,179,617	713,369	425,343	229,050	329,811	70,181	73,104	111,958	3,132,433
VALUE OF WORK YET TO BE DONE ON BUILDINGS UNDER CONSTRUCTION AT END OF YEAR									
1967-68	297,625	220,897	99,612	51,348	84,372	30,506	13,416	26,940	824,715
1968-69	361,832	226,647	84,167	60,346	115,335	28,060	15,512	28,076	919,975
1969-70	454,371	275,232	66,088	78,600	139,430	25,677	17,098	51,395	1,107,891
1970-71	549,064	274,561	110,131	98,807	110,402	32,691	27,352	74,785	1,277,793
1971-72	571,933	320,543	123,509	96,994	86,784	30,464	22,566	71,852	1,324,645

The following tables show the value of *all new buildings completed* in each State and Territory during 1971-72 and in Australia during the years 1967-68 to 1971-72, according to the *type of building*.

**NEW BUILDINGS COMPLETED, BY TYPE OF BUILDING: VALUE  
STATES AND TERRITORIES, 1971-72**

(\$'000)

<i>Type of building</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Houses—</b>									
Brick, brick veneer, concrete and stone	317,878	287,994	121,057	91,277	150,482	22,008	15,631	54,484	1,060,811
Wood (weatherboard, etc.)	22,116	6,450	45,737	265	267	1,615	283	96	76,829
Asbestos-cement	55,574	11,701	24,081	6,004	13,856	586	8,147	..	119,949
Other	1,946	169	6,113	289	2,129	1,959	1,134	..	13,737
<b>Total houses</b>	<b>397,514</b>	<b>306,315</b>	<b>196,988</b>	<b>97,834</b>	<b>166,736</b>	<b>26,165</b>	<b>25,196</b>	<b>54,581</b>	<b>1,271,329</b>
<b>Flats</b>	<b>169,677</b>	<b>75,421</b>	<b>38,741</b>	<b>27,411</b>	<b>13,914</b>	<b>5,534</b>	<b>5,295</b>	<b>1,876</b>	<b>337,869</b>
<b>Total houses and flats</b>	<b>567,191</b>	<b>381,735</b>	<b>235,731</b>	<b>125,243</b>	<b>180,650</b>	<b>31,699</b>	<b>30,489</b>	<b>56,457</b>	<b>1,609,195</b>
<b>Hotels, hostels, etc.</b>	<b>21,973</b>	<b>20,197</b>	<b>14,575</b>	<b>3,246</b>	<b>13,237</b>	<b>2,464</b>	<b>7,566</b>	<b>509</b>	<b>83,767</b>
<b>Shops</b>	<b>39,246</b>	<b>16,710</b>	<b>18,110</b>	<b>2,334</b>	<b>16,833</b>	<b>2,515</b>	<b>3,316</b>	<b>1,868</b>	<b>100,932</b>
<b>Factories</b>	<b>115,494</b>	<b>73,415</b>	<b>22,059</b>	<b>17,889</b>	<b>21,336</b>	<b>4,124</b>	<b>2,953</b>	<b>2,071</b>	<b>259,341</b>
<b>Offices</b>	<b>152,083</b>	<b>57,770</b>	<b>23,509</b>	<b>16,800</b>	<b>19,360</b>	<b>6,746</b>	<b>5,061</b>	<b>9,905</b>	<b>291,234</b>
<b>Other business premises</b>	<b>63,317</b>	<b>26,577</b>	<b>29,063</b>	<b>8,772</b>	<b>14,591</b>	<b>2,854</b>	<b>2,512</b>	<b>3,396</b>	<b>151,082</b>
<b>Education</b>	<b>73,553</b>	<b>52,262</b>	<b>24,939</b>	<b>22,144</b>	<b>16,325</b>	<b>9,240</b>	<b>5,330</b>	<b>10,611</b>	<b>214,404</b>
<b>Religion</b>	<b>4,602</b>	<b>3,265</b>	<b>1,420</b>	<b>1,153</b>	<b>1,152</b>	<b>162</b>	<b>366</b>	<b>368</b>	<b>12,488</b>
<b>Health</b>	<b>21,217</b>	<b>25,428</b>	<b>7,850</b>	<b>11,663</b>	<b>17,250</b>	<b>6,668</b>	<b>4,665</b>	<b>1,513</b>	<b>96,254</b>
<b>Entertainment and recreation</b>	<b>30,386</b>	<b>7,877</b>	<b>6,663</b>	<b>2,178</b>	<b>6,385</b>	<b>1,006</b>	<b>1,578</b>	<b>1,606</b>	<b>57,678</b>
<b>Miscellaneous</b>	<b>49,190</b>	<b>12,145</b>	<b>13,829</b>	<b>3,618</b>	<b>24,322</b>	<b>2,238</b>	<b>7,299</b>	<b>2,063</b>	<b>114,704</b>
<b>Total other buildings</b>	<b>571,064</b>	<b>295,645</b>	<b>162,018</b>	<b>89,792</b>	<b>150,791</b>	<b>38,020</b>	<b>40,644</b>	<b>33,911</b>	<b>1,381,885</b>
<b>Total new buildings</b>	<b>1,138,253</b>	<b>677,381</b>	<b>397,748</b>	<b>215,036</b>	<b>331,440</b>	<b>69,717</b>	<b>71,132</b>	<b>90,367</b>	<b>2,991,074</b>

**NEW BUILDINGS COMPLETED, BY TYPE OF BUILDING: VALUE  
AUSTRALIA, 1967-68 TO 1971-72**

(\$'000)

<i>Type of building</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
<b>Houses—</b>					
Brick, brick veneer, concrete and stone	598,159	705,906	830,364	897,144	1,060,811
Wood (weatherboard, etc.)	89,686	85,903	84,190	74,037	76,829
Asbestos-cement	109,414	116,030	118,190	118,297	119,949
Other	6,603	7,033	7,804	8,068	13,737
<b>Total houses</b>	<b>803,864</b>	<b>914,871</b>	<b>1,040,543</b>	<b>1,097,548</b>	<b>1,271,329</b>
<b>Flats</b>	<b>218,894</b>	<b>267,262</b>	<b>338,884</b>	<b>368,427</b>	<b>337,869</b>
<b>Total houses and flats</b>	<b>1,022,758</b>	<b>1,182,133</b>	<b>1,379,426</b>	<b>1,465,974</b>	<b>1,609,195</b>
<b>Hotels, hostels etc.</b>	<b>47,898</b>	<b>55,454</b>	<b>73,897</b>	<b>79,263</b>	<b>83,767</b>
<b>Shops</b>	<b>60,239</b>	<b>77,321</b>	<b>85,984</b>	<b>96,355</b>	<b>100,932</b>
<b>Factories</b>	<b>162,186</b>	<b>190,520</b>	<b>196,661</b>	<b>211,204</b>	<b>259,341</b>
<b>Offices</b>	<b>169,841</b>	<b>158,191</b>	<b>157,232</b>	<b>243,621</b>	<b>291,234</b>
<b>Other business premises</b>	<b>73,416</b>	<b>98,823</b>	<b>118,171</b>	<b>156,774</b>	<b>151,082</b>
<b>Education</b>	<b>144,998</b>	<b>161,402</b>	<b>161,256</b>	<b>180,796</b>	<b>214,404</b>
<b>Religion</b>	<b>13,145</b>	<b>16,132</b>	<b>11,828</b>	<b>13,719</b>	<b>12,488</b>
<b>Health</b>	<b>49,703</b>	<b>56,200</b>	<b>71,347</b>	<b>92,037</b>	<b>96,254</b>
<b>Entertainment and recreation</b>	<b>33,942</b>	<b>41,924</b>	<b>44,451</b>	<b>47,929</b>	<b>57,678</b>
<b>Miscellaneous</b>	<b>87,561</b>	<b>98,561</b>	<b>82,070</b>	<b>103,370</b>	<b>114,704</b>
<b>Total other buildings</b>	<b>842,927</b>	<b>954,529</b>	<b>1,002,888</b>	<b>1,225,064</b>	<b>1,381,885</b>
<b>Total new buildings</b>	<b>1,865,684</b>	<b>2,136,661</b>	<b>2,382,318</b>	<b>2,691,039</b>	<b>2,991,074</b>

The following table shows the value of *all new buildings completed* in Australia during the years 1969-70 to 1971-72, classified by *type of building and private and government ownership*.

**NEW BUILDINGS COMPLETED, BY TYPE OF BUILDING AND OWNERSHIP: VALUE  
AUSTRALIA, 1969-70 TO 1971-72  
(\$'000)**

Type of building	Private			Government		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Houses—						
Brick, brick veneer, concrete and stone . . . . .	769,971	827,511	987,011	60,395	69,635	73,801
Wood (weatherboard, etc.) . . . . .	68,088	60,553	61,919	16,101	13,482	14,909
Asbestos-cement . . . . .	85,401	81,726	86,891	32,787	36,570	33,059
Other . . . . .	5,284	6,822	10,894	2,519	1,244	2,843
Total houses . . . . .	928,741	976,616	1,146,715	111,802	120,932	124,616
Flats . . . . .	313,677	341,047	309,177	25,207	27,383	28,685
Total houses and flats . . . . .	1,242,417	1,317,667	1,455,897	137,011	148,311	153,297
Hotels, hostels, etc. . . . .	64,856	73,395	75,174	9,043	5,869	8,594
Shops . . . . .	84,570	95,455	99,386	1,416	899	1,546
Factories . . . . .	184,573	192,141	221,519	12,090	19,064	37,822
Offices . . . . .	105,412	167,158	229,314	51,818	76,464	61,918
Other business premises . . . . .	66,638	90,418	99,490	51,534	66,350	51,589
Education . . . . .	28,702	33,611	36,358	132,553	147,189	178,049
Religion . . . . .	11,828	13,719	12,488	..	..	..
Health . . . . .	14,775	23,342	34,683	56,574	68,701	61,568
Entertainment and recreation . . . . .	34,738	40,047	46,233	9,713	7,883	11,447
Miscellaneous . . . . .	35,882	48,041	65,332	46,186	55,334	49,371
Total other buildings . . . . .	631,969	777,323	919,978	370,921	447,747	461,900
Total new buildings . . . . .	1,874,386	2,094,985	2,375,874	507,932	596,054	615,201

**Value of building approved**

The following table shows the values of approvals for houses and flats, other new buildings, and alterations and additions in Australia for the years 1967-68 to 1971-72. Before 1 July 1966 additions of \$10,000 and over were included with new buildings in all States except New South Wales, where they were included in 'alterations and additions'. From 1 July 1966 alterations and/or additions of \$10,000 and over are included with new buildings in all States.

**BUILDING APPROVED: VALUE, AUSTRALIA, 1967-68 TO 1971-72  
(\$'000)**

Type of building	1967-68	1968-69	1969-70	1970-71	1971-72
Houses and flats . . . . .	1,099,733	1,314,645	1,485,617	1,437,015	1,633,164
Other new buildings . . . . .	908,708	938,910	1,280,708	1,318,143	1,391,684
Total new buildings . . . . .	2,008,441	2,253,555	2,766,325	2,755,157	3,024,846
Alterations and additions . . . . .	143,436	156,096	168,810	188,354	223,078
Total building . . . . .	2,151,877	2,409,651	2,935,135	2,943,503	3,247,925
Private . . . . .	1,614,157	1,902,675	2,317,867	2,300,021	2,605,494
Government . . . . .	537,720	506,976	617,268	643,476	642,437



**Persons working on jobs carried out by builders of new buildings**

The following table shows the number of contractors, sub-contractors and wage earners working on jobs *carried out by builders of new buildings* in each State and Territory at 30 June 1972. It also shows the numbers of these persons classified according to their main building occupations and the type of building on which they were working.

**PERSONS WORKING ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS  
STATES AND TERRITORIES, 30 JUNE 1972**

**INCLUDING CONTRACTOR AND SUB-CONTRACTOR PRINCIPALS ACTUALLY WORKING  
ON JOBS BUT EXCLUDING PERSONS WORKING ON OWNER-BUILT HOUSES**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Contractors . . . .	4,174	3,163	1,846	581	590	304	47	279	10,984
Sub-contractors . . . .	11,385	11,050	4,830	3,837	3,213	773	323	1,361	36,772
Wage earners . . . .	44,817	26,893	19,495	10,091	11,694	3,887	1,505	3,941	122,323
Carpenters . . . .	17,485	12,960	10,252	3,307	3,623	1,974	614	1,334	51,549
Bricklayers . . . .	7,330	5,614	2,444	2,279	2,258	490	177	666	21,258
Painters . . . .	3,971	3,525	2,155	1,240	1,395	314	150	533	13,283
Electricians . . . .	4,064	2,738	1,406	947	1,165	275	123	336	11,054
Plumbers . . . .	4,982	4,373	2,290	1,232	1,446	326	136	419	15,204
Builders' labourers . . . .	9,302	4,968	3,624	1,985	2,208	741	339	780	23,947
Other . . . .	13,242	6,928	4,000	3,519	3,402	844	336	1,513	33,784
New houses and flats . . . .	27,065	21,432	12,708	7,157	7,065	2,087	774	2,859	81,147
Other new buildings(a) . . . .	30,191	18,888	12,316	7,150	6,996	2,657	1,029	2,433	81,660
Repairs and maintenance(b) . . . .	3,120	786	1,147	202	1,436	220	72	289	7,272
<b>Total . . . .</b>	<b>60,376</b>	<b>41,106</b>	<b>26,171</b>	<b>14,509</b>	<b>15,497</b>	<b>4,964</b>	<b>1,875</b>	<b>5,581</b>	<b>170,079</b>

(a) Includes persons working on alterations and additions carried out by builders of new buildings. (b) Carried out by builders of new buildings.

The number of persons in each State and Territory working on jobs *carried out by builders of new buildings* at the end of June of each year 1968 to 1972 is shown in the following table.

**PERSONS WORKING ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS  
STATES AND TERRITORIES, JUNE 1968 TO 1972**

**INCLUDING CONTRACTOR AND SUB-CONTRACTOR PRINCIPALS ACTUALLY WORKING  
ON JOBS BUT EXCLUDING PERSONS WORKING ON OWNER-BUILT HOUSES**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
28 June 1968 . . . .	50,415	45,458	23,709	11,370	16,812	6,129	1,566	4,632	160,091
30 " 1969 . . . .	55,909	46,462	26,077	12,019	19,201	5,618	1,662	4,534	171,482
30 " 1970 . . . .	57,928	45,190	23,620	13,282	19,593	5,493	1,668	5,313	172,087
30 " 1971 . . . .	58,816	42,243	25,050	13,474	17,792	5,734	2,643	5,828	171,580
30 " 1972 . . . .	60,376	41,106	26,171	14,509	15,497	4,964	1,875	5,581	170,079

## Government activities in the housing field

### Housing Agreements between Commonwealth and State Governments

Under the Commonwealth-State Housing Agreements the Commonwealth Government makes substantial long-term loans to the States for the provision of housing.

*The 1945 Agreement.* In November 1945 the Commonwealth Government entered into an Agreement with the Governments of the States whereby the Commonwealth Government would provide finance for, and the State Governments would undertake the building of, housing projects. Between 1945-46 and 1955-56, under this Agreement, the Commonwealth Government advanced to the States a total of \$481,118,000.

Initially, dwellings constructed under the 1945 Agreement were only sold to tenants if the tenant was able to arrange payment of the full purchase price to the State immediately on sale. Subsequent amendments to the Agreement progressively eased conditions of sale. For information on the conditions of sale, etc., under the 1945 Agreement see Year Book No. 48, page 367.

*The 1956 Agreement.* In 1956 the Commonwealth and the States entered into a new Agreement under which added emphasis was placed on the construction of dwellings for private ownership. The Agreement provided that parts of the loans advanced to each State were to be advanced to building societies and other approved institutions for lending to private home builders and purchasers. The balance of the amounts advanced to each State was used by the States for the erection of dwellings for either rental or sale. The Commonwealth was entitled to specify that up to five per cent of the moneys allocated for the erection of dwellings by the State be set aside for the erection of dwellings for serving members of the defence forces. For features of the 1956 Commonwealth and State Housing Agreement see Year Book No. 48, pages 367-8.

*The 1961 Agreement.* The period during which Commonwealth advances to the States could be made under the 1956 Agreement terminated on 30 June 1961. A new Agreement was entered into which extended for a further five years the period during which advances could be made and also amended the 1956 Agreement in certain respects concerning funds for the erection of dwellings for rental to servicemen and the rate of interest payable on Commonwealth advances.

*The 1966 Agreement.* A new Agreement was entered into which extended for a further five years the period during which advances could be made, and also amended the 1956-1961 Agreement in certain respects concerning the definition of 'member of the forces', the erection by the States of blocks of flats in metropolitan areas, the erection of dwellings for rental to servicemen, and the provision of finance to home builders in rural areas.

For further information regarding the 1961 and 1966 Agreements see Year Book No. 53, pages 276-7, and Year Book No. 58, pages 208-9.

#### **States Grants (Housing) Act 1971**

The 1956-66 Housing Agreement expired on 30 June 1971 and was not further renewed. Instead, the Commonwealth and State Governments agreed upon a new arrangement under which the provisions contained in the Housing Agreement would be substantially continued for a period of five years up to 30 June 1976. Financial assistance is being made available principally in the form of non-repayable interest-free grants for specific purposes.

A basic housing grant of \$2.75 million per annum is payable for 30 years in respect of State housing activities in the 1971-72 financial year. Similarly a further \$2.75 million per annum is payable for 30 years in respect of State housing activities in each of the following four financial years. In total, over the period for which the grant is payable, the States will receive \$412.5 million. The grant is to be applied towards reducing the payments that would otherwise, but for the grant, have been required to be made not only by tenants and purchasers of State housing authority dwellings but also by borrowers from building societies and certain other approved institutions operating on advances from a special Home Builders' Account.

A Rental Assistance Grant of \$1.25 million per annum in each of the five years 1971-72 to 1975-76 is being distributed amongst the States for use by each State housing authority in reducing the rents of dwellings for families they consider to have insufficient means to meet the rents ordinarily payable to the authority.

#### **Commonwealth-State Housing Agreement (Servicemen)**

An Agreement was concluded between the Commonwealth and State Governments to take effect for five years from 1 July 1971, to provide separately for the erection by the States of dwellings for allotment to servicemen. Construction programs are negotiated annually for which the full capital cost is advanced by the Commonwealth as required by the States.

**Operations under the States Grants (Housing) Act and the Commonwealth-State Housing Agreement (Servicemen)**

The following table shows the results of operations under the *States Grants (Housing) Act* 1971 and the Commonwealth-State Housing Agreement (Servicemen) during 1971-72. Corresponding figures for 1970-71 appear in Year Book No. 58, page 208.

**STATES GRANTS (HOUSING) ACT 1971: SUMMARY 1971-72**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>HOUSING FUNDS \$'000</b>							
Allocation of State loan moneys for housing . . . . .	55,500	36,500	12,800	27,700	20,700	8,300	161,500
State housing authorities(a) . . . . .	38,850	25,550	9,550	13,100	16,350	5,810	109,210
Home builders' account(b) . . . . .	16,650	10,950	3,250	14,600	4,350	2,490	52,290
Amounts drawn by institutions . . . . .	28,570	16,593	4,289	15,626	2,039	2,778	69,895
Commonwealth-State Housing Agreement (Servicemen) Commonwealth advances . . . . .	5,545	1,165	..	..	324	..	7,034

**NUMBER OF DWELLINGS**

State housing program—							
Commenced . . . . .	2,396	2,202	1,438	1,436	555	648	8,675
Completed . . . . .	4,005	2,220	1,443	1,588	1,356	518	11,130
Under construction at 30 June 1972 . . . . .	1,985	1,489	598	1,218	401	321	6,012
Home builders' account—							
Purchased—							
New . . . . .	1,211	974	255	958	45	101	3,544
Other . . . . .	458	..	..	..	..	101	559
New construction—							
Approved . . . . .	617	929	264	1,580	139	179	3,708
Commenced . . . . .	1,144	798	231	1,619	143	141	4,076
Completed . . . . .	1,236	693	241	1,638	92	198	4,098
Service housing—							
Agreed program . . . . .	244	153	..	..	14	..	411
Completed(c) . . . . .	556	215	174	..	106	..	1,051
Sold under—							
1945 agreement . . . . .	375	452	152	..	110	(d)	1,089
1956-1966 agreements . . . . .	1,056	542	458	355	118	55	5,498
States Grants (Housing) Act 1971 . . . . .	929	667		235	779	304	

(a) The maximum amount is 70 per cent of the State loan moneys for housing. (b) The minimum amount must be 30 per cent of the State loan moneys for housing. (c) Also included in State housing program above and may include completions of houses for servicemen programmed in previous years. (d) Tasmania did not operate under the 1945 Agreement after August 1950.

**Dwellings for Aged Pensioners Scheme**

This Scheme is directed towards those in the community considered to be most in need of housing assistance. These are single eligible pensioners living alone in unsuitable private accommodation and paying too high a proportion of their pensions in rent. Most State housing authorities have for many years been building accommodation for aged persons, and Commonwealth Government assistance under this Scheme was introduced to supplement the States' efforts and to effect a more rapid reduction in the waiting lists with State housing authorities.

Under the *States Grants (Dwellings for Aged Pensioners) Act* 1969 an amount of \$25 million is being made available to the States over a period of five years from 1969-70 to 1973-74 for construction by them of single self-contained accommodation for allocation, at rents they can afford to pay, to single eligible pensioners in receipt of supplementary assistance under the *Social Services Act* 1947-1972 or the *Repatriation Act* 1920-1972.



Building Schemes approved so far under the Act are shown in the following table. Typical rents for these units are in the vicinity of \$3.00 a week.

#### DWELLINGS FOR AGED PENSIONERS SCHEME: APPROVALS

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Number of building schemes approved—							
1969-70 . . . .	19	9	..	8	..	1	37
1970-71 . . . .	26	13	4	3	9	4	59
1971-72 . . . .	27	2	20	13	13	6	81
Number of units in approved schemes—							
1969-70 . . . .	229	316	..	100	..	20	665
1970-71 . . . .	269	295	18	50	104	32	768
1971-72 . . . .	636	192	154	190	108	35	1,315
Estimated cost of approved schemes—							
1969-70 . . \$'000	1,299	1,675	..	433	..	130	3,537
1970-71 . . \$'000	1,660	2,291	136	238	702	138	5,165
1971-72 . . \$'000	5,871	1,785	1,286	1,068	603	262	10,875

#### War service homes

The *Defence Service Homes Act* 1918-1973 formerly the *War Service Homes Act* 1918-1971 makes provision for assistance to be granted to persons who satisfy the eligibility conditions set out in the Act, to enable them to acquire on concessional terms a soundly constructed home that they would occupy as a residence.

Persons eligible for assistance under the Act include members of the Australian forces and nursing services enlisted or appointed for or employed on active service outside Australia or on a ship of war during the 1914-18 and 1939-45 Wars and persons who served in the warlike operations in Korea or Malaya or who have served on 'special service' as defined in the *Repatriation (Special Overseas Service) Act* 1962-1968. 'Special service' includes 'special duty' in an area which by reason of warlike operations or a state of disturbance has been declared a 'special area' under the *Repatriation (Special Overseas Service) Act*. The areas declared as a 'special area' under the Act are:

Vietnam (Southern Zone) from 31 July 1962;

certain areas of Borneo, Sabah and Sarawak from 8 December 1962 to 30 September 1967;

certain areas of Malaya from 28 May 1963;

Malaysia (the remainder) and Singapore from 7 July 1965 to 30 September 1967;

Vietnamese waters from 1 March 1967.

The categories of eligible persons also include the widow and, in some circumstances, the widowed mother of an eligible person and persons domiciled in Australia and employed in certain sea-going service during the 1914-18 and 1939-45 Wars.

The maximum amount of loan or advance which may be granted under the *War Service Homes Act* 1918-1971 is \$9,000. The period of repayment may be up to forty-five years. In the case of a widow or widowed mother of an Australian ex-serviceman, the period may be extended to a maximum of fifty years.

The Director of War Service Homes is responsible for the execution of the War Service Homes Act subject to the directions of the Minister for Housing.

**Operations under the War Service Homes Act**

The following tables give details of the operations under the War Service Homes Act in the year 1971-72 and from the inception of the scheme on 6 March 1919 to 30 June 1972. The earliest single year for which details are given in the tables is 1967-68; for earlier years *see* previous issues of the Year Book. The figures shown include operations in Papua New Guinea and Norfolk Island.

**WAR SERVICE HOMES ACT: OPERATIONS, AUSTRALIA, 1971-72  
AND TO 30 JUNE 1972**

		1971-72			From inception to 30 June 1972		
		Eligibility established from service in—			Eligibility established from service in—		
		1939-45 War, Korea, etc.(a)			1939-45 War, Korea, etc.(a)		
		1914-18 War		Total	1914-18 War		Total
Applications received	No.	279	11,186	11,465	119,099	441,671	560,770
Applications approved	„	184	7,450	7,634	58,543	267,538	326,081
Homes purchased	„	136	4,889	5,025	20,439	142,044	162,483
Homes built, or assistance given to build them	„	8	822	830	24,152	71,695	95,847
Mortgages discharged	„	18	1,248	1,266	4,328	36,254	40,582
<b>Total homes provided</b>	<b>„</b>	<b>162</b>	<b>6,959</b>	<b>7,121</b>	<b>48,919</b>	<b>249,993</b>	<b>298,912</b>
Transfers and resales	„	19	430	449	9,649	15,855	25,504
Total capital expenditure	\$'000	n.a.	n.a.	65,000	n.a.	n.a.	1,491,750
Total receipts	„	n.a.	n.a.	83,496	n.a.	n.a.	1,078,966

(a) Korea, Singapore, Malaysia or Vietnam (Southern Zone) and Vietnamese waters.

**WAR SERVICE HOMES ACT: OPERATIONS, AUSTRALIA  
1967-68 TO 1971-72**

		Number of—						
		Homes provided					Total capital expenditure	Total receipts
		Applications received	Homes purchased (a)	Homes built(b)	Mortgages discharged	Total		
Year							\$'000	\$'000
1967-68	.	9,664	4,483	807	1,162	6,452	46,019	69,165
1968-69	.	10,715	4,668	767	1,105	6,540	50,191	72,622
1969-70	.	10,940	4,643	796	1,225	6,664	55,000	77,911
1970-71	.	10,174	5,031	1,040	1,231	7,302	61,000	78,483
1971-72	.	11,465	5,025	830	1,266	7,121	65,000	83,496

(a) Homes purchased with assistance under the War Service Homes Act.

(b) Or assistance given to build a home.

**WAR SERVICE HOMES ACT: ADVANCES FOR HOUSING AND NUMBER OF HOMES PROVIDED, STATES AND TERRITORIES, 1967-68 TO 1971-72**

<i>Period or date</i>	<i>N.S.W. (a)</i>	<i>Vic.</i>	<i>Qld (b)</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Total</i>
<b>TOTAL CAPITAL ADVANCED DURING YEAR (\$'000)</b>									
1967-68 .	19,635	11,346	6,800	2,997	3,520	1,195	3	524	46,020
1968-69 .	19,000	14,000	7,908	3,468	3,750	1,350	2	712	50,190
1969-70 .	21,300	14,550	8,900	4,048	4,100	1,300	52	750	55,000
1970-71 .	23,052	16,850	9,721	4,288	4,675	1,530	92	792	61,000
1971-72 .	21,680	18,770	11,095	5,971	4,623	1,670	89	1,102	65,000

<b>NUMBER OF SECURITIES IN FORCE</b>									
<i>At end of June—</i>									
1968 .	63,840	54,453	24,279	16,581	18,530	4,066	50	1,051	182,850
1969 .	64,319	54,682	24,642	16,598	18,194	4,124	46	1,103	183,708
1970 .	64,623	54,804	25,021	16,593	18,017	4,168	49	1,164	184,439
1971 .	65,028	55,116	25,446	16,621	17,954	4,245	61	1,236	185,707
1972 .	64,731	55,338	25,683	16,710	17,769	4,295	69	1,318	185,913

<b>VALUE OF ADVANCES OUTSTANDING (\$'000)</b>									
<i>At end of June—</i>									
1968 .	335,040	261,680	108,139	75,476	88,508	19,277	(c)	(d)	888,120
1969 .	340,331	264,336	111,744	75,916	87,421	19,791	(c)	(d)	899,539
1970 .	345,620	267,047	115,835	76,575	86,776	20,223	(c)	(d)	912,076
1971 .	352,150	271,295	120,595	77,469	87,091	20,848	(c)	(d)	929,448
1972 .	354,389	276,348	125,180	79,367	86,641	21,466	(c)	(d)	943,391

<b>NUMBER OF HOMES PROVIDED</b>									
1967-68 .	2,761	1,564	974	419	487	171	1	75	6,452
1968-69 .	2,492	1,820	1,025	451	486	178	..	88	6,540
1969-70 .	2,526	1,817	1,092	508	454	168	6	93	6,664
1970-71 .	2,785	1,989	1,180	537	512	191	11	97	7,302
1971-72 .	2,330	2,078	1,248	664	463	202	10	126	7,121

(a) Includes Norfolk Island. (b) Includes Papua New Guinea. (c) Included in South Australia. (d) Included in New South Wales.

In addition to the homes provided under the War Service Homes Act and shown above, 2,846 homes, which had been provided originally under the Housing Agreements with the States, have been taken over in accordance with those Agreements.

#### Home Savings Grant Scheme

The administration of the Home Savings Grant Scheme is a function of the Commonwealth Department of Housing. The purpose of the Scheme is to assist young married persons, and young widowed or divorced persons with dependent children, to purchase or build their own homes. A further objective is to increase the proportion of total savings available for housing purposes by encouraging young people to save with those institutions which provide the bulk of housing finance. The Scheme is governed by the *Homes Savings Grant Act 1964-1972*. The Act authorises the payment of grants from the National Welfare Fund.

The Scheme provides for the payment of grants of \$1 for every \$3 saved by eligible persons under 36 years of age for the first home they own after marriage. The savings must be made over a period of at least three years and held in an approved form. The maximum grant to a married couple, or to husband or wife if only one is eligible, or to a widowed or divorced person, is \$750 on savings of \$2,250 or more. Smaller grants down to a minimum of \$10 are payable on lesser amounts saved.



To be eligible for the grant, a person must be married, widowed or divorced, with one or more dependent children, and must have—or must be married to a person who has—entered into a contract to buy a home or have one built, or begun to build a home as an owner-builder. The person must be under 36 years of age at the time of marriage and at the date of the contract to buy or build or the date building began; must have either been an Australian citizen or lived in Australia during the three years immediately preceding that date; and must also have saved in Australia in an approved form throughout that period. Those three years are known as the applicant's 'savings years'. The grant is payable in respect of existing homes and homes being built. Flats and home-units may also be eligible provided separate title can be obtained. The value of the home, including the land, the house itself and any other improvements, must not exceed \$22,500, or \$17,500 if the contract to buy or build the home was made, or the building of the home as an owner-builder began, before 16 August 1972. Most homes are eligible, the main exception being homes purchased from State housing authorities which have been built with moneys advanced by the Commonwealth under the Commonwealth-State Housing Agreement at concessional rates of interest or where the terms of purchase have been subsidised by reason of a Commonwealth Grant to the State under the *States Grants (Housing) Act 1971*.

The main forms of savings acceptable under the Scheme are accounts with savings banks and fixed deposits with trading banks (but not cheque accounts), and deposits with or shares in registered building or co-operative housing societies. Savings spent in connection with the purchase or construction of the home prior to the date of the contract to buy or build the home, or the date building began, are also acceptable. Savings held with a credit union are acceptable provided the particular credit union has become an approved credit union for the purposes of the Scheme. The amount of savings that qualify for a grant is the sum of the amounts by which the acceptable savings have increased each year, up to a limit of \$900 in any one savings year (\$600 if the contract date was before 16 August 1972), added to the acceptable savings held at the start of the three-year savings period.

Full details of the Scheme are set out in the official pamphlet *A Grant for Your Home* available from banks, building and housing societies, post offices, and offices of the Commonwealth Department of Housing throughout Australia. Additional statistical information is contained in the Annual Reports by the Secretary, Department of Housing, on the *Homes Savings Grant Act 1964-1972*, which are available from the Australian Government Publishing Service Bookshops.

#### Operations under the Home Savings Grant Scheme

Particulars of applications received and approved during 1971-72 and during the period from 20 July 1964, when the Scheme commenced to operate, to 30 June 1972 are set out below.

#### HOME SAVINGS GRANT SCHEME: OPERATIONS, STATES AND TERRITORIES, 1971-72

		N.S.W.	Vic.	Qld	S.A.(a)	W.A.	Tas.	A.C.T. (b)	Aust.
Applications received	No.	10,945	14,698	6,776	4,953	2,749	1,199	415	41,735
Applications approved(c)	"	9,881	13,934	6,388	4,494	2,574	1,002	401	38,674
Grants approved	\$'000	4,374	6,267	2,724	1,923	1,090	421	171	16,970
Average grant approved	\$	443	450	426	428	423	420	427	439
Expenditure from National Welfare Fund	\$'000	4,535	6,440	2,766	1,922	1,115	442	177	17,397

(a) Includes Northern Territory. (b) Includes Municipality of Queanbeyan, N.S.W. (c) Includes applications received on or before 30 June 1970 and approved after that date.

#### HOME SAVINGS GRANT SCHEME: OPERATIONS, 1967-68 TO 1971-72 AND TO 30 JUNE 1972

Year	Applications received	Applications approved	Grants approved	Average grant approved	Expenditure from National Welfare Fund
			\$'000	\$	\$'000
1967-68	34,412	32,518	13,446	414	13,299
1968-69	34,485	30,630	12,704	415	13,015
1969-70	33,699	28,828	12,364	429	12,336
1970-71	39,796	35,778	15,763	441	15,200
1971-72	41,735	38,674	16,970	439	17,397
<b>Total from 20 July 1964</b>	<b>279,260</b>	<b>248,922</b>	<b>108,092</b>	<b>434</b>	<b>107,828</b>

## Homes qualifying for grants

The following two tables contain particulars of homes in respect of which grants were approved during 1971-72. As grants are payable only to persons under 36 years of age and in respect of homes costing no more than a prescribed amount (\$17,500 if acquired before 16 August 1972), these statistics should not be regarded as being applicable to home owners in general.

**HOME SAVINGS GRANT APPLICATIONS APPROVED(a): MANNER OF ACQUISITION  
TOTAL VALUE, AND AVERAGE VALUE OF HOMES (INCLUDING LAND)  
STATES AND TERRITORIES, 1971-72**

	N.S.W.	Vic.	Qld	S.A.(b)	W.A.	Tas.	A.C.T.(c)	Aust.
<b>Purchase of house(d)—</b>								
Number of approvals	6,121	9,259	3,962	3,075	1,252	710	274	24,653
Total value(e) . . \$'000	79,684	120,382	43,330	36,676	16,428	7,738	4,363	308,601
Average value(e) . . \$	13,018	13,002	10,937	11,927	13,121	10,898	15,923	12,517
<b>Purchase of flat or home unit—</b>								
Number of approvals	918	131	42	43	83	2	1	1,220
Total value(e) . . \$'000	13,546	1,657	519	479	1,092	21	13	17,327
Average value(e) . . \$	14,756	12,647	12,344	11,130	13,160	10,525	13,450	14,202
<b>Home built under contract—</b>								
Number of approvals	2,593	4,232	2,187	1,313	1,179	204	108	11,816
Total value(f) . . \$'000	39,306	61,428	28,194	18,651	17,513	2,729	1,715	169,536
Average value(f) . . \$	15,158	14,515	12,891	14,205	14,855	13,376	15,886	14,348
<b>Owner-built home—</b>								
Number of approvals	249	312	197	63	60	86	18	985
Total value(g) . . \$'000	2,982	4,238	2,176	787	823	1,140	274	12,420
Average value(g) . . \$	11,976	13,585	11,047	12,497	13,715	13,249	15,217	12,609
<b>All homes—</b>								
Number of approvals	9,881	13,934	6,388	4,494	2,574	1,002	401	38,674
Total value . . \$'000	135,518	187,705	74,219	56,592	35,857	11,627	6,366	507,884
Average value . . \$	13,715	13,471	11,618	12,593	13,930	11,604	15,875	13,132

(a) Includes applications received on or before 30 June 1970 and approved after that date. (b) Includes Northern Territory. (c) Includes Queanbeyan, N.S.W. (d) Includes previously occupied houses. (e) Usually based on the purchase price. (f) Usually based on the cost of the land and the contract price of the dwelling. (g) Usually based on the cost of the land and the assessed value of the dwelling.

**HOME SAVINGS GRANT APPLICATIONS APPROVED: METHOD OF FINANCING HOMES  
AND AVERAGE MORTGAGE LOANS, STATES AND TERRITORIES, 1971-72**

State or Territory	Method of financing homes					Average first mortgage loan(b)	Average second mortgage loan
	With first mortgage loan and without second mortgage loan	With first and second mortgage loans	Others(a)	Total			
	number	number	number	number	\$	\$	\$
New South Wales	8,305	1,243	333	9,881	9,335	2,481	
Victoria	11,208	1,689	1,037	13,934	9,058	2,334	
Queensland	5,778	357	253	6,388	8,410	2,020	
South Australia(c)	3,073	1,256	165	4,494	8,692	2,181	
Western Australia	2,116	267	191	2,574	10,478	2,636	
Tasmania	853	78	71	1,002	8,676	1,989	
Australian Capital Territory(d)	61	339	1	401	8,430	4,446	
<b>Australia</b>	<b>31,394</b>	<b>5,229</b>	<b>2,051</b>	<b>38,674</b>	<b>9,054</b>	<b>2,458</b>	

(a) Homes financed without mortgage loan. Includes homes financed from the applicants' own resources only, with personal or unsecured loans, purchased under a terms contract of sale, etc. (b) Includes homes financed with and without second mortgage loans. (c) Includes Northern Territory. (d) Includes Queanbeyan, N.S.W.

## Housing loans insurance scheme

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act* 1965-66 to insure approved lenders against losses arising from the making of housing loans. The main purpose of the activities of the Corporation is to assist people to borrow, as a single loan, the money they need and can afford to repay to obtain a home suited to their requirements.

The Corporation will insure loans of up to \$40,000. The maximum loan to valuation ratio is 95 per cent for loans for the purchase or construction of homes. A once-and-for-all premium of 1.5 per cent of the amount of the loan is charged by the Corporation for the insurance of loans representing 90 per cent or more of valuation. The premium rate falls progressively to a minimum of 0.25 per cent on loans of less than 70 per cent of valuation. The premium normally is paid by the borrower, but lenders may agree to add it to the amount of the loan for repayment by the borrower over the duration of the loan. The maximum period for repayment of a loan on the purchase or construction of a home is forty years.

The Corporation insures loans for purposes other than the purchase or construction of a dwelling. These include alterations, extensions or improvements to a dwelling. An insured loan may be made only by an approved lender. Approved lenders are appointed by the Corporation from within approved classes of lenders specified by the Minister for Housing. The approved classes include banks, building and housing societies (permanent and terminating), friendly societies, life and general insurance companies, trustee companies, superannuation and other retirement funds, mortgage management companies and solicitors. The Corporation commenced its operations in November 1965. By the end of December 1972 110,456 loans to a value of \$1,159 million had been insured.

### State housing authorities

The following paragraphs describe briefly the organisation of the various State housing authorities and their activities in the fields of home construction and provision of homes on a rental basis (*see* pages 220–24 for their financial advances to persons wishing to purchase or build a home). For summarised figures of total government construction of houses and flats, *see* pages 202, and 205. For a fuller description of the activities of State housing authorities and their financial advances to home purchasers or builders *see* Year Book No. 53, pages 283–91.

*New South Wales—The Housing Commission of New South Wales.* The Housing Commission of New South Wales was constituted in 1942, its principal function being the provision of low-cost housing to persons in the lower or moderate income groups.

Advances from the Commonwealth have provided most of the Housing Commission's capital funds and by 30 June 1972 had aggregated \$575,209,000 of which \$69,348,000 had been repaid. Other net funds of the Commission at 30 June 1972 comprised repayable advances from the State, \$58,559,000; public loans raised by the Commission, \$1,895,000 grants from the Commonwealth, \$5,499,000, grants from the State, \$20,107,000 (including \$9,035,000 from consolidated revenue and \$11,000,000 from taxes on poker machines); provision for maintenance of properties, \$5,296,000; and accumulated surplus, \$49,546,000. In addition, the Commission owed \$14,591,000 to creditors, mainly for purchase, of land and work-in-progress. These funds were represented by fixed assets, \$656,308,000 (including \$217,489,000 debtors for purchase of homes) and current assets, \$5,044,000. In 1971–72, the Commission's income was \$51,115,000 (including rent \$34,723,000 and interest \$11,518,000), expenditure \$46,543,000 (interest, \$22,656,000), and capital expenditure \$63,293,000.

Most of the permanent dwellings provided by the Commission have been erected under the Commonwealth-State Housing Agreements. In 1971–72, 5,218 houses and flats, valued at \$44,550,000, were completed for the Housing Commission by private builders on contract to the Commission.

Upon request by other State Departments the Housing Commission will erect houses for employees of those Departments, the Departments providing the necessary lands and funds. In addition, the Commission erects (with State funds) dwellings for employees of industries connected with decentralisation and development. Specially designed units are erected by the Housing Commission to provide dwellings for elderly persons at rentals within their means. The rents of these units, as at 30 June 1972, are approximately \$3.95 a week for elderly single persons and \$6.00 a week for elderly couples, and 6,184 units had been completed at 30 June 1972.

*Victoria—Housing Commission, Victoria.* The Housing Commission, Victoria, was set up in 1938 as a result of the Housing Act of the previous year. The objects of the Commission as now laid down are the improvement of existing housing conditions; the provision of suitable rental housing for persons displaced by slum reclamation or living under unsatisfactory conditions, and for other eligible persons; the sale of houses to eligible persons and the making of advances to such persons to enable them to own their homes; the development of land for housing and related purposes; and the preparation and implementation of Urban Renewal Proposals. Since the signing of the 1945 Commonwealth-State Housing Agreement the construction of dwellings has been financed by the Commonwealth Government and Commission Funds.

At 30 June 1972 the Housing Commission had completed 1,328 dwelling units under the State Housing Scheme, and 71,093 dwelling units under Commonwealth-State Agreements and Commonwealth Grant. Specially designed dwelling units are erected by the Commission to provide dwellings for elderly persons at rentals within their means. To 30 June 1972, 5,099 units have been completed.



*Queensland—The Queensland Housing Commission.* The Queensland Housing Commission was established in 1945 to assist in meeting the housing shortage. In addition, the Commission was empowered to build houses itself, either for sale or for rental.

The Housing Commission finances its operations through two Treasury Trust Funds—the Queensland Housing Commission Fund and the Commonwealth-State Housing Fund. In addition, a Home Builders' Deposit Trust Fund is available to assist eligible persons to accumulate money to acquire land and erect a Commission dwelling thereon, or to purchase a dwelling under contract of sale conditions. Total disbursements by the Commission for the year 1971–72 amounted to \$37,812,651, representing \$9,001,660 from the Queensland Housing Commission Fund and \$28,810,991 from the Commonwealth-State Housing Fund, while the Home Builder's Deposit Fund had a nil balance at 30 June 1972.

During 1971–72 the Commission completed 1,750 house units, bringing the total completions under all schemes since the revival of housing construction in 1944–45 to 43,466. Of this number 25,373 houses, or 58.4 per cent, were for home ownership, and 18,093, or 41.6 per cent, were for rental.

In the field of rental housing the Commission administers and acts as the constructing authority under the Commonwealth-State Housing Agreements and the Commonwealth Acts—*States Grants (Aged Pensioners Housing) Act* 1969 and *States Grants (Housing) Act* 1971. Operating under the provisions of the *State Housing Act* 1945–1971, the Commission, through its scheme of workers' dwellings, makes advances for the construction of dwellings to eligible persons who own a suitable building site. The number of workers' dwellings completed during 1971–72 amounted to 157, making a total of 31,143 completions since the inception of the scheme. The Commission also has power to make advances, secured by mortgage, to firms for housing of employees. The Commission has power to sell houses under contract of sale conditions. Contract of sale agreements were made to purchase 735 of the Commission's houses during 1971–72.

*South Australia—The South Australian Housing Trust.* The South Australian Housing Trust operates under the South Australian Housing Trust Act, 1936–1971 and the Housing Improvements Act, 1940–1971 for the purpose of providing houses for families of limited means. Houses are built for both rental and sale, and to 30 June 1972, 72,507 had been completed throughout the State, of which some 38,049 had been built and sold under various schemes. At 30 June 1972 the rents of five-roomed (i.e. three bedrooms) double-unit houses ranged from \$10.00 a week for houses of an older type to \$12.50 a week for houses then being completed. Single units rent ranged between \$14.00 and \$18.50. Two- and three-storey groups of flats with weekly rentals ranging from \$9.00 to \$17.75 per flat have been built in the Metropolitan Area; of these 1,501 flats are situated in the Metropolitan Area and 292 at Elizabeth. In 1953 the Trust began building cottage or pensioner flats for elderly people. At 30 June 1972 it had built 1,367 cottage flats from its own resources and an additional 774 for charitable and non-profit organisations.

During 1962–63 the Trust commenced construction of rental-purchase houses. The aim of this scheme is to provide less expensive houses for the lower income groups. It is expected that such houses will, to some extent, replace double-unit type rental houses. The Trust has also undertaken the construction of houses for various State Government Departments which need to house staff in country districts. In addition, 243 houses in country areas have been built for the Department of Community Welfare. The letting of these houses to selected Aboriginal families is administered by the Department. In order to assist primary producers the Trust will erect houses on the applicant's own land for his own use or that of his employees, either using local materials or transporting pre-fabricated houses to the site.

*Western Australia—State Housing Commission of Western Australia.* The activities of the State Housing Commission extend throughout the whole State. In addition to construction of a variety of dwellings for its own rental and purchase programme as determined under the State Housing Act, the Commonwealth-State Housing Agreements prior to 30 June 1971 and subsequently the *States Grants (Housing) Act* 1971, its activities include;

- The management as agent of the Commonwealth War Service Homes Scheme in Western Australia;

- Construction of houses for other Government Departments (both Commonwealth and State also semi- and local government authorities) in Western Australia;

- Construction and maintenance of houses for the Government Employees' Housing Authority.

At 30 June 1972, the Commission had completed under all schemes since 30 June 1944, a total of 56,455 units of accommodation throughout the State.

During the twelve months ended 30 June 1972, 2,579 units of accommodation were completed; metropolitan area, 2,007; country, 395; and north of 26th parallel, 177; and a further 1,242 units were under construction.

Despite the high rate of home construction and the ready availability of private project-built homes for purchase, the demand—particularly from the lower income groups—continues to be high. A large proportion of this demand is directed to the State Housing Commission.

Building societies are a major source of housing finance in Western Australia. At 30 June 1972 it was estimated that the assets of all societies were about \$403 million. Currently, 15 permanent and 375 terminating societies are operating. As a condition of eligibility for assistance under the *States Grants (Housing) Act 1971*, the State is required to allocate at least 30 per cent of its housing authority new borrowings for advances through building societies, or other approved bodies.

Under the *Housing Loans Guarantee Act, 1957–1972*, the guarantees provided to financial institutions enable loans to be made to lending institutions with full security. The Act enables building societies and other approved bodies to make high ratio advances to families of low and moderate means without additional charge. The interest rate charged to the borrower may not exceed 7.5 per cent reducible. Loans may be made up to 95 per cent of the value of the house and land or a specified sum, whichever is the lesser amount. In respect of the metropolitan region, the maximum loan permitted is \$12,000, and outside the metropolitan region, but south of the 26th parallel, \$13,000. For a new house situated north of the 26th parallel and in the North West or Eastern Land Divisions, the maximum loan is \$17,500 and in the Kimberley Land Division \$20,000.

*Tasmania—The Housing Department.* The Housing Department was established in 1953 and is responsible for administering that portion of the *Homes Act 1935* which relates to the acquisition and development of land for housing purposes and the erection of homes for rental and sale by purchase contract, and the *Casual Worker's and Unemployed Persons' Homes Act 1936*.

During 1971–72, 563 dwellings were completed. Construction since 1944 has totalled 13,212 dwelling units, comprising 12,444 detached and semi-detached units (9,641 of timber), 449 elderly persons' flatettes, 22 maisonettes, and 296 multi-unit flats.

Flats, maisonettes, villa units, and elderly persons' homes are for rental only. Single unit dwellings may be allotted on either a purchase contract or rental basis. The weekly rental of a newly erected three-bedroom brick veneer house in the Hobart metropolitan area approximated \$20.25 in the June quarter of 1972. In certain necessitous cases rental rebates are allowed. Under the current rental rebate formula, a married couple occupying an elderly persons' unit and whose only income is the age pension pay \$3.80, while a single person solely dependent on the pension pays \$2 a week.

Most purchase contract allotments are made on a no-deposit basis with repayments over a maximum period of fifty-three years. Purchase contracts are sometimes surrendered to the Department. Net of surrenders, 8,985 purchase contracts had been entered into by June 1972. The sale price, excluding land, of a new three-bedroom house in the Hobart metropolitan area was approximately \$12,000 in June of 1972.

#### Housing schemes in Commonwealth Territories

*Northern Territory.* In 1946 control of all government-owned residences in the Territory (excluding those belonging to the Defence Services or Commonwealth Railways, or attached to post offices) was vested in the Administration. The Northern Territory Housing Commission was established in 1959 and operates under authority of the *Housing Ordinance 1959–1971*. The Commission became autonomous on 1 October 1969 and provides rental housing for persons of limited means who are not adequately housed and who are not officers of either the Commonwealth or the Northern Territory Public Service. To 30 June 1972 the Commission had completed a total of 3,169 houses and flats; 2,275 of these are in Darwin (including 490 flats), 609 in Alice Springs (including 161 flats); 136 in Katherine (including 29 flats); 131 in Tennant Creek (including 15 flats); 6 houses in Pine Creek; 8 houses in Adelaide River and 2 each in Elliot and Mataranka. In addition, 49 houses and 8 flats were taken over from the Department of Defence in Alice Springs; 2 houses in Katherine and 1 house in Tennant Creek were acquired from the Northern Territory Administration. A further 363 houses and 22 flats were under construction.

*Australian Capital Territory.* The Commonwealth Government provides houses and flats for rental to persons employed in the Australian Capital Territory. At 30 June 1972 the Department of the Capital Territory controlled 8,109 houses and 2,022 flats for rental purposes. Government rental houses may be purchased by tenants. From 1 July 1950 to 30 June 1972, 9,780 houses had been sold to tenants.

*Papua New Guinea.* In 1960 the Administration, through the Commissioner for Housing, commenced a housing loans scheme for providing low-cost houses for rental and eventual sale,



where possible, to indigenes, mixed race peoples and Asians. This scheme was taken over by the Housing Commission at its inception on 1 July 1968, along with the 323 houses built under the scheme.

A Housing Commission was established to improve existing housing conditions, to provide adequate and suitable housing for letting and sale to persons who are of limited means, to make advances for home purchase, and to develop land for housing. Details of housing constructed are as follows: 323 houses taken over from the Administration on 1 July 1968; 279 houses constructed during the year ended 30 June 1969; 54 houses and 64 flats constructed during the year ended 30 June 1970; 50 houses taken over from the Administration on 1 July 1970; 481 houses and 64 flats constructed during the year ended 30 June 1971; and 436 houses and flats constructed during the year ended 30 June 1972.

#### Summary of rental activities of government authorities

The first of the following two tables shows the revenue from rental for dwellings under control of government housing authorities each year from 1967-68 to 1971-72, and the second, the number of tenants paying rent for dwellings under control of government housing authorities at the end of each year 1967-68 to 1971-72.

#### GOVERNMENT HOUSING AUTHORITIES: REVENUE FROM RENTALS STATES AND TERRITORIES, 1967-68 TO 1971-72

(\$'000)

Year	N.S.W.	Vic.	Qld(a)	S.A.(b)	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	22,779	16,266	6,702	11,603	7,161	1,761	1,103	3,861	71,236
1968-69	24,661	17,207	7,486	12,506	8,003	1,902	1,261	4,137	77,163
1969-70	27,048	18,062	8,403	13,493	8,120	2,008	1,703	4,459	83,296
1970-71	29,851	20,618	9,286	14,300	10,076	2,152	3,387(c)	5,300	94,970
1971-72	34,723	22,274	10,405	15,700	11,378	2,315	3,366	5,744	105,905

(a) Excludes rentals in respect of tenanted temporary dwellings. (b) Excludes rentals in respect of temporary and emergency dwellings. (c) Includes undercharges in respect of 1969-70.

#### GOVERNMENT HOUSING AUTHORITIES: NUMBER OF TENANTS PAYING RENT STATES AND TERRITORIES, 1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld(a)	S.A.(b)	W.A.	Tas.(c)	N.T.	A.C.T.(c)	Aust
1967-68	57,643	35,774	14,781	30,012	17,771	3,590	2,824	9,440	171,835
1968-69	60,293	36,403	15,693	31,322	18,340	3,644	2,939	9,904	178,538
1969-70	62,293	37,591	16,202	31,993	19,226	3,741	3,400	10,311	184,757
1970-71	63,983	38,237	17,038	33,378	22,056	3,951	3,710	10,567	192,920
1971-72	66,740	39,694	17,670	34,382	23,236	4,158	4,261	10,048	200,189

(a) Excludes tenanted temporary dwellings. (b) Excludes temporary and emergency dwellings. (c) Number of occupied dwellings at 30 June.

#### Advances to home purchasers

Many prospective home purchasers wish to borrow for the purpose of constructing or purchasing their own homes. Usually the loan is covered by way of mortgage of the home to be constructed or bought. Such loans are provided from a number of private sources and from agencies owned or guaranteed by the State or Commonwealth Governments. The information in this section concerns the direct loans made to home purchasers by the more important institutional lenders. Loans to institutions which in turn lend moneys to home purchasers and loans to contract builders, etc. are excluded as far as possible. The loans may be for the construction of new dwellings, the purchase of existing dwellings, for additions, renovations, etc., as first or subsequent mortgages, overdrafts and so on. While figures of all loans to home purchasers are not available, the institutions mentioned account for a significant proportion of total loans. Details of the terms and conditions of lending are given, together with available information on the number and value of loans made.



## State authorities and agencies

*New South Wales*

*Rural Bank of New South Wales—Sale of Homes Agency.* A Sale of Homes Agency was established in 1954 to arrange for the sale on terms of houses erected by the Housing Commission of New South Wales. The Agency's operations began with the sale to selected purchasers of 100 houses made available by the Commission during 1954-55 and 1955-56. The sales were made on the basis of 10 per cent deposit and repayment of the balance over a maximum period of forty years, with interest at 4.5 per cent per annum. Total advances under that scheme amounted to \$646,648; at 30 June 1972 the advances outstanding amounted to \$280,517 in respect of 64 houses.

Since 1956 the Sale of Homes Agency has acted as the agent of the Housing Commission in arranging the sale on terms of houses erected under the Commonwealth-State Housing Agreements. The terms of sale provide for a minimum deposit of \$200 and repayment of the balance over a maximum period of forty-five years, with interest rates, since the inception of the scheme, ranging from 4.25 to 6.75 per cent per annum. Particulars of the advances made by the Agency in connection with the sale of houses erected under the 1956, 1961, and 1966 Agreements and the *States Grants (Housing) Act* of 1971 are given in the following table.

**RURAL BANK OF NEW SOUTH WALES—SALE OF HOMES AGENCY ADVANCES FOR HOMES SOLD UNDER THE 1956, 1961 AND 1966 COMMONWEALTH-STATE HOUSING AGREEMENTS AND THE STATES GRANTS (HOUSING) ACT OF 1971**  
1967-68 TO 1971-72

Year	Advances during year		Total advances to end of year		Advances outstanding at end of year(a)	
	Number of houses	Amount	Number of houses	Amount	Number of houses	Amount
		\$'000		\$'000		\$'000
1967-68 . . .	1,444	12,866	20,809	149,975	18,724	127,288
1968-69 . . .	1,227	11,167	22,036	161,141	19,406	133,363
1969-70 . . .	1,751	17,074	23,787	178,215	20,523	144,511
1970-71 . . .	2,080	22,144	25,867	200,359	21,953	160,426
1971-72 . . .	1,978	24,827	27,845	225,186	23,130	177,309

(a) Comprises principal outstanding and loan charges due but not paid.

The Sale of Homes Agency also acts as agent for the Housing Commission in arranging the sale of houses erected by the Commission on applicants' land. Under this scheme persons who have established a housing need may apply to the Commission to have a standard-type dwelling erected on their own land. The houses are sold, at a price equivalent to their capital cost, on the same terms as for houses erected under the 1956 to 1966 Housing Agreements and the *States Grants (Housing) Act* of 1971. Up to 30 June 1972, 667 houses had been built at a cost of \$5,179,856, the balance of indebtedness at that date was \$4,299,719.

*Rural Bank of New South Wales—Other loans.* The Rural Bank of New South Wales provides assistance to individuals for the erection or purchase of homes and for other approved purposes associated with homes. Advances are based on the bank's official valuation of the dwelling. The rate of interest on long-term loans for housing purposes is 5.75 per cent per annum.

*Victoria*

*Housing Commission of Victoria.* Very few houses were sold by the Commission until 1954 but the added emphasis given to the construction of houses for private ownership by the amendments in the Commonwealth-State Housing Agreement in 1955-56 had the effect of substantially increasing the number of houses sold.

Of the 72,421 dwelling units built up to 30 June 1972, under the State Housing Scheme, the Commonwealth-State Agreements and Commonwealth Grant, a total of 33,131 houses have been sold (17,620 in the metropolitan area and 15,511 in the country).

*Home Finance Trust.* In 1956 a Home Finance Trust was established with the object of receiving money from institutions and others in order to make loans for the erection or purchase of houses. Applicants for loans must declare that they intend to use the houses as homes for themselves, their families and dependants.

Loans granted are on the basis of a first mortgage over the house. Loans are not to exceed ninety-five per cent of the value of the security (house and land) and are not made if the value of the security exceeds \$14,000. The house must not have been erected more than two years before the date of mortgage. Repayment of loans may be made over a maximum period of thirty years, with interest charges determined by the Trust. At 30 June 1972, 3,682 loans totalling \$26,121,109 were outstanding.

In 1963 the Trust was empowered to make housing loans on the security of second mortgages subject to conditions similar to those applying to the first mortgage loans, except that the maximum term for repayment of a loan is ten years and no restriction is placed on the percentage of loan to valuation. At 30 June 1972, 1,648 second mortgage loans were outstanding, the amount involved being \$2,336,860.

(See Savings Banks, page 224, for activities of the State Savings Bank of Victoria).

### *Queensland*

*Queensland Housing Commission.* The present maximum advance allowable under the Act is \$10,500 for a timber, brick veneer, brick, or concrete building. The rate of interest charged on new advances was increased from 5.5 per cent to 6.125 per cent per annum from 3 November 1969, and was further increased to 7.125 per cent per annum from 30 July 1970. The rate charged on new advances was reduced to 5.5 per cent per annum from 1 October 1971. Repayments may be made at the option of the borrower over either a thirty year or a forty-five year period.

*Workers' dwellings.* From 4 October 1962 the maximum advance under this scheme was increased to \$7,000 for all types of workers' dwellings. This was increased to \$8,000 from 2 June 1966, to \$9,000 from 22 May 1969, to \$10,000 from 23 September 1971 and \$10,500 from 1 July 1972. Total advances made for dwellings since operations commenced in 1910 to 30 June 1972 amounted to \$74,009,285.

### *South Australia*

*South Australian Housing Trust Sales Schemes.* Prospective purchasers of Housing Trust houses (other than Rental Purchase houses) may purchase either by paying cash or by paying a deposit and arranging for a loan on security of a first mortgage from any of the recognised lending authorities. In cases where the deposit and the first mortgage so raised are insufficient, the Trust may advance the balance of the house price on security of a second mortgage, the term of which is usually coterminous, but not exceeding 30 years. The interest rate is 7.5 per cent and the principal is adjusted quarterly. During 1971-72 the Trust commenced 344 second mortgages valued at \$530,585. At 30 June 1972 second mortgages totalled 8,400 and the balance outstanding at that date was \$9,500,000. A minimum deposit of \$100 is required for houses built under the Rental Purchase Scheme. The balance of the purchase price is repayable to the Trust in weekly instalments over periods up to 40 years at 5.5 per cent interest per annum.

*State Bank of South Australia.* The State Bank, together with the Housing Trust, are the principal agents of the State Government for the distribution of moneys received under housing assistance arrangements with the Commonwealth. During 1971-72 the Bank opened 1,880 new accounts worth \$16,606,831 in the Home Builders' Account. The balance of loans outstanding on this account at 30 June 1972, totalled \$116,150,247. The Bank administers the Advances for Homes Act, 1928-1972 on behalf of the State Government. However, advances under this Act have virtually ceased and the only funds being made available are for repairs to tenancy houses and for extra bedroom accommodation. The balance outstanding under this Act at 30 June 1972 was \$18,864,133. The present maximum housing loan is \$10,000, repayable over a period not exceeding fifty years at a rate of interest of 6 per cent per annum calculated on monthly balances.

(See Savings Banks, page 225 for activities of the Savings Bank of South Australia.)

### *Western Australia*

*State Housing Commission of Western Australia.* Under the State Housing Act (and the Commonwealth-State Housing Agreement up to 30 June 1971) the maximum loan is \$8,000 by way of mortgage, while under contract of sale the maximum is \$6,500 on the building plus the value of the land in the metropolitan area, and greater amounts in rural areas, depending on the circumstances.

To proceed under the mortgage conditions, a deposit of not less than 10 per cent is required, but under contract of sale the deposit may be as low as \$200. The interest rate on all advances is 5.375 per cent per annum and the repayment period is forty-five years. The income eligibility figure varies according to the movement of the basic wage, and currently an applicant in the Metropolitan Area cannot have an income exceeding \$5,038 a year, plus \$100 for each dependent child under twenty-one

years of age. For the country, the corresponding amount is \$5,064 per annum plus \$100 for each dependent child under twenty-one years, and north of the twenty-sixth parallel the Minister may allow families with an income of up to \$5,350 plus \$100 for each dependent child under twenty-one years of age to be given financial assistance. A second-mortgage scheme exists under the State Housing Act, which provides that assistance be limited to those applicants who are building or purchasing new homes, the cost of which, excluding land, does not exceed \$10,000. The Commission limits the second mortgage to a maximum of \$2,000.

(See Savings Banks, page 225, for activities of the Savings Bank Division of The Rural and Industries Bank of Western Australia.)

### *Tasmania*

*Housing Department.* The interest rate on purchase contract loans as at 1 July 1972, was 5 per cent. To be eligible for a house on purchase contract terms an applicant must be married or about to be married, or have dependants for whom it is necessary to provide a home. The number of loans outstanding at 30 June 1972 was 7,998, and the amount outstanding \$58,982,000.

*Agricultural Bank of Tasmania.* The Agricultural Bank, as an approved institution under the Commonwealth-State Housing Agreement, receives part of those funds allocated for advances to home builders. To be eligible for a loan an applicant must be married or about to be married, be over the age of twenty-one, and own a block of land. The maximum amount of an advance to an applicant is \$9,000 for all types of houses in certain areas, provided that the total advance does not exceed ninety per cent of the Bank's valuation of land and dwelling. Advances to borrowers are repayable by equated instalments over thirty years. Advances made as from 1 March 1972 were at an interest rate of 6 per cent per annum.

During 1971-72, 291 advances were approved, valued at \$2,571,000. Since November 1945 a total of 4,900 loans amounting to \$32,658,000 has been approved, of which 3,630 have been for erection of dwellings and 1,270 for the purchase of existing homes. Total advances outstanding at 30 June 1972 amounted to \$22,187,000. These figures exclude advances to building societies.

### **Commonwealth authorities and Territories**

#### *Department of Housing*

In December 1963 the Department of Housing was created, and to it were transferred the functions and staff of the War Service Homes Division, and the Housing and Building Industry Branch of the then Department of National Development.

#### *War Service Homes*

For details of the operations under the *Defence Services Homes Act* 1918-1973, formerly the War Service Homes Act, see pages 212-14.

#### *Northern Territory*

*Loans Scheme.* This scheme was commenced in 1953 and is administered by the Home Finance Trustee under the *Housing Loans Ordinance* 1949-1967. Advances may be made for the erection of a house, the purchase or enlargement of an existing house, the completion of a partially erected dwelling, or the discharge of a mortgage already existing. Loans are provided on a deposit of 5 per cent of the first \$4,000 and 10 per cent of the balance of the Trustee's valuation up to a maximum of \$9,000. The rate of interest charged is 7.25 per cent per annum reducible to 6.25 per cent per annum if instalment payments are made by the due date. The maximum period of repayment is forty-five years for brick houses and twenty-five years for other houses. Up to 30 June 1972, 1,361 loans totalling \$7,761,950 had been approved. These were for: erection, 794; purchase, 410; enlargement or completion, 98; discharge of mortgage, 59.

*Sales Scheme.* Tenants of government-owned houses under the control of the Administration may purchase the dwellings they occupy either for cash or on terms requiring a minimum deposit of 5 per cent of the purchase price with repayments over a maximum period of forty-five years including interest at 6.25 per cent per annum.

*Housing Commission Sales Scheme.* Since the November 1963 amendment of the *Housing Ordinance* 1959-1971 the Housing Commission has been permitted to sell its houses to tenants in occupation. The terms require a minimum cash deposit of \$200 and repayment of the remainder of the loan over a period not exceeding forty-five years; there is no prescribed limit to the amount of the loan and the rate of interest is fixed by the Commission from time to time.



*Australian Capital Territory*

Loans may be granted by the Commissioner for Housing to enable persons to purchase or build a new house in the Australian Capital Territory. Where the Commissioner's valuation does not exceed \$4,000 the maximum loan may not exceed ninety-five per cent of the valuation. If the Commissioner's valuation exceeds \$4,000, the maximum loan is ninety-five per cent of the first \$4,000 and ninety per cent of the balance (but in no case can the amount lent exceed \$9,000). Repayment may be made over a maximum period of forty-five years. The current rate of interest is 7.25 per cent per annum with a concession of 1 per cent for payments made on or before the due date. At 30 June 1972, 9,780 houses were under mortgage to the Commissioner.

Government rental houses may be purchased by tenants. The basis of the sale is a minimum deposit of 5 per cent of the purchase price fixed by the Department of the Capital Territory with no limit to the amount which may be held on mortgage from the Department. Repayment of the amount covered by mortgage may be made over a maximum period of forty-five years. The interest rate is 7.25 per cent per annum with a concession of 1 per cent for payment made on or before the due date. To 30 June 1972, 9,780 houses had been sold to tenants.

*Papua New Guinea*

Under authority of the *Housing Loans Ordinance* 1953-1963, the Commissioner for Housing may make advances to any members of the community for the erection of a house, the purchase or enlargement of an existing house, the completion of a partially erected dwelling, or the discharge of a mortgage already existing. The Commissioner's responsibilities were transferred to the Housing Commission on 1 July 1968. The maximum loan is \$7,000 or 90 per cent of the Commission's valuation whichever is the lesser. The maximum period of repayment is twenty-five years for all dwellings. The effective rate of interest is currently 8.25 per cent per annum, or 1 per cent above the borrowing rate of the funds. Up to 30 June 1972, 634 loans totalling \$3,279,115 had been approved.

**Savings banks**

All savings banks lend funds for housing to both individuals and building societies. Details of savings banks housing finance transactions during the years 1969-70, 1970-71 and 1971-72 are shown in the following table. (See the chapter Private Finance for further details.)

**SAVINGS BANKS: HOUSING LOANS APPROVED AND BALANCES OUTSTANDING TO INDIVIDUALS, STATES AND TERRITORIES, 1969-70 TO 1971-72**

(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.(a)	W.A.	Tas.	A.C.T.	Total
LOANS APPROVED DURING YEAR								
1969-70	140,535	190,079	52,612	46,164	27,200	9,188	3,404	469,182
1970-71	180,112	200,372	65,486	54,168	47,283	14,085	5,701	567,207
1971-72	209,365	229,581	81,192	75,768	48,198	18,298	8,090	670,492
BALANCES OUTSTANDING AT END OF YEAR								
1969-70	524,010	748,483	196,498	254,401	120,144	45,487	9,258	1,898,281
1970-71	588,020	826,435	226,709	275,201	145,274	50,879	12,389	2,124,907
1971-72	663,869	915,839	260,540	307,357	166,540	59,782	18,115	2,392,042

(a) Includes Northern Territory.

*State Savings Bank of Victoria.* The Bank grants long-term loans to depositors to enable them to build, purchase or improve homes. These loans are granted by both the Credit Foncier and Savings Bank Departments.

The maximum proportion of valuation to be granted as Credit Foncier loan is eighty per cent and the maximum loan is \$8,000. Interest is 6.25 per cent and the term of the loan is ten years, subject to renewal. The maximum proportion of valuation granted as Savings Bank Department loan is eighty per cent with no limit on the maximum loan. For a property to be occupied by the borrower the interest rate is at least 6.75 per cent, depending on the amount of the loan. The above conditions are those current as at 16 October 1972 but are subject to review and alteration by the Bank at any time. During the year 1971-72 the Bank advanced \$90,002,809 to 9,819 borrowers in addition to

\$64,835 to Co-operative Housing Societies. At 30 June 1972 the total debt of 78,994 individual borrowers was \$472,271,987, while indebtedness of Co-operative Housing Societies and the Home Finance Trust amounted to \$9,113,235 and \$9,544,134 respectively.

*Savings Bank of South Australia.* The bank grants mortgage loans for the building or purchase, for personal occupation, of existing houses, houses not previously occupied and those to be erected. Normally advances are made up to 85 per cent of the Bank's valuation or 90 per cent where the borrower elects to insure the loan with the Housing Loan Insurance Corporation and pay the necessary premium which may be added to the loan if so desired. The maximum loan period is thirty years and the rate of interest on loans of up to \$10,000 is 6.75 per cent per annum; this rate is subject to review at any time. Loans above \$10,000 are available at slightly higher interest rates.

During 1971-72 the Bank advanced \$19,497,145 by way of housing loans, the number of new loans totalling 2,289. At 30th June 1972 there were 27,372 housing loans current with a balance outstanding of \$148,403,252.

*Rural and Industries Bank of Western Australia (Savings Bank Division).* The Rural and Industries Bank of Western Australia is authorised by the *Rural and Industries Bank Act, 1944-1966* to make loans from moneys on deposit with its Savings Bank Division to a person or body for the purchase or erection of a dwelling. It is the policy of the Bank to provide funds for housing primarily for occupancy by the borrower. There is no fixed limit on the amount of a loan. At 30 June 1972 loans up to \$8,000 attracted interest at 6.5 per cent per annum reducible, loans up to \$10,000 7 per cent per annum reducible, whereas loans above \$10,000 attracted varying rates of interest dependent upon the particular circumstances. Loans may be approved up to terms of thirty years but the average term of housing loans is eighteen to twenty years.

The bank undertakes the sub-division and development of land and the erection of homes which are sold under conditions which ensure that the purchasers are genuine home seekers. This activity commenced in May 1967. The number of homes built to 30 June 1972 was 384, whilst another 44 were under construction. In addition, 331 building lots (under certain restrictions) were made available to project builders for the erection and sale of houses. A further 1,001 building lots have been auctioned to the public under restrictions designed to favour genuine home seekers.

### Trading banks

Apart from loans by certain State banks as Government agencies (*see* pages 221-23) advances for housing to individuals are also provided by the trading banks. Amounts outstanding in respect of advances to individuals for housing purposes made by the major trading banks were \$341 million on the second Wednesday of July 1972 (*see* the chapter Private Finance for further details).

### Life insurance companies

The life insurance companies are another source of funds for housing. Details of new loans paid over during the twelve months ended June 1968 to 1972 and amounts outstanding at end of June 1968 to 1972, are given in the following table.

**LIFE INSURANCE COMPANIES: HOUSING LOANS PAID OVER AND AMOUNTS OUTSTANDING, STATES AND TERRITORIES, 1967-68 TO 1971-72**  
(\$'000)

	(a)1967-68	(a)1968-69	1969-70	1970-71	1971-72
Housing loans paid over during period—					
New South Wales . . . . .	23,729	29,130	33,151	29,686	30,419
Victoria . . . . .	19,471	22,549	23,791	21,145	20,004
Queensland . . . . .	(b)4,918	(b)6,098	6,135	6,921	7,159
South Australia . . . . .	(c)4,559	(c)5,366	5,415	6,033	5,908
Western Australia . . . . .	5,331	6,446	5,283	5,335	5,086
Tasmania . . . . .	1,171	1,530	1,588	1,728	1,751
Northern Territory . . . . .	(c)	(c)	132	40	133
Australian Capital Territory . . . . .	631	666	874	991	1,459
<b>Total . . . . .</b>	<b>(b)59,810</b>	<b>(b)71,784</b>	<b>76,369</b>	<b>71,879</b>	<b>71,918</b>
Amounts outstanding on housing loans at end of period(b) . . . . .	378,151	397,958	422,284	442,567	454,513

(a) Excludes the business of the State Government Insurance Office of New South Wales and the Queensland State Government Insurance Office. (b) Includes Papua New Guinea. (c) Loans made in Northern Territory included in South Australia.

**Registered building societies**

There were 5,429 registered building societies operating in Australia during the year ending 30 June 1971 of which 189 are permanent societies and the remainder terminating societies. The permanent societies are, in the main, investment societies which make loans for housing purposes, usually on credit foncier terms, and obtain their funds from share capital, deposits and borrowings from banks and other lending institutions. The terminating societies make loans to members from funds obtained from lending institutions (usually government guaranteed), members' subscriptions and, since 1956, from moneys provided under the Commonwealth-State Housing Agreements. Details of new loans paid over and net advances outstanding for each of the years ended June 1967 to 1971 are given in the following table (*see also* the chapter Private Finance).

**REGISTERED BUILDING SOCIETIES: STATES, 1966-67 TO 1970-71**  
( $\$^{\circ}000$ )

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>LOANS PAID OVER DURING YEAR</b>							
1966-67 . .	112,738	36,493	20,641	4,412	14,031	6,338	194,653
1967-68 . .	142,084	49,456	29,369	5,121	24,436	9,545	260,011
1968-69 . .	176,282	53,059	38,044	7,901	48,650	7,914	331,850
1969-70 . .	225,151	54,212	49,276	12,135	91,481	12,008	444,263
1970-71 . .	232,138	61,229	54,428	12,951	84,150	8,142	453,038
<b>NET ADVANCES OUTSTANDING(a) AT END OF YEAR</b>							
1966-67 . .	507,093	236,144	85,730	19,470	61,015	26,659	936,111
1967-68 . .	593,438	259,574	103,194	22,388	77,254	32,204	1,088,052
1968-69 . .	715,029	284,894	127,830	27,529	113,812	35,542	1,304,636
1969-70 . .	861,985	309,186	162,363	36,466	189,482	42,603	1,602,085
1970-71 . .	995,647	338,445	194,708	45,439	253,389	44,930	1,872,558

(a) Net of borrowing members' funds.

**Other lenders**

Little information is available on advances made by other lenders such as superannuation and other trust funds, private finance and investment companies, etc. In South Australia advances on first mortgage made by the South Australian Superannuation Fund are granted on a credit foncier basis. Loans are limited to 70 per cent of value unless repayments are insured with an approved insurer, in which case loans of up to 90 per cent of value are made. The interest rate may be varied from time to time, the present minimum rate being 7.5 per cent per annum. The maximum term is 30 years for homes of solid construction, and 20 years for timber-framed homes. At 30 June 1972 there were 4,978 loans current, the principal outstanding totalling \$24,752,034. During 1971-72 the value of advances made was \$2,970,300.



## CHAPTER 10

### LABOUR, WAGES AND PRICES

For particulars of the Farm Production Price Index, see the chapter Miscellaneous. For current information on the subjects dealt with in this chapter, see the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5) (monthly), and the *Quarterly Summary of Australian Statistics* (1.3), also the mimeographed statements *Wage Rates and Earnings* (6.16), *Consumer Price Index* (9.1), *Consumer Price Index Monthly Food Group Index Numbers* (9.11), *Wholesale Price Index of Materials used in Building other than House Building* (9.6), *Wholesale Price Index of Materials used in House Building* (9.9), *Wholesale Price Indexes—Price Index of Electrical Installation Materials* (9.5), *Wholesale Price Indexes—Price Indexes of Metallic Materials* (9.10), and *Export Price Index* (9.2). For further information on these subjects, except the Export Price Index, see the *Labour Report* (6.7) issued by this Bureau.

### RETAIL PRICES AND PRICE INDEXES

Retail prices of food and groceries and average rentals of houses for years extending back to 1901 have been collected by the Commonwealth Statistician, and in some cases were recorded by the Statisticians of various States for earlier years.

Retail prices of a more extensive range of commodities (including clothing) and certain services in common demand have been ascertained at frequent and regular intervals since 1923, and comparable information was ascertained for the month of November in each year from 1914 to 1922. The range of items for which retail prices data are obtained was considerably expanded in 1948 and in later years. Average retail prices of certain food and grocery items in current periods are published in the annual *Labour Report*.

An explanation of the nature and purposes of retail price indexes is given in the various editions of the annual *Labour Report*, together with further particulars of indexes then current. Previous retail price indexes for Australia are briefly described below. The current retail price index, entitled the Consumer Price Index, was published for the first time in August 1960. It was compiled retrospectively to 1948–49. A description of the Consumer Price Index is given on pages 228–30.

#### Previous retail price indexes

Five series of retail price indexes had been compiled at various times for Australia by the Commonwealth Statistician prior to 1960. Each of these was continued until changed conditions required the compilation of indexes more directly relevant to current conditions. The respective indexes were as follows.

- (i) *The 'A' Series Index* (covering food, groceries and house rents) was first compiled in 1912 with the year 1911 as base = 1,000. It was discontinued in June 1938.
- (ii) *The 'B' Series Index* (covering food, groceries and rent of 4 and 5 roomed houses) was first compiled in 1925 and continued until December quarter 1953. It was the food and rent constituent of the 'C' Series Index and was designed to replace the 'A' Series Index for general statistical purposes.
- (iii) *The 'C' Series Index* (covering food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, smoking, and some other miscellaneous items) was first compiled in 1921. It was last issued on its original basis for December quarter 1960. For certain transitional purposes a 'C' Series Index was issued for some quarters after that. This was calculated by varying the index numbers of December quarter 1960 in proportion to movements shown by the Consumer Price Index.
- (iv) *The 'D' Series Index*, derived by combining the 'A' and 'C' Series Indexes, was used by the Commonwealth Court of Conciliation and Arbitration from May 1933 to May 1934 and then discontinued.

- (v) *The Interim Index* (covering food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, smoking, certain services and some miscellaneous items) was first compiled in 1954 with the year 1952-53 as base = 100. As its title indicated, it was constructed as a transitional index. Its compilation was discontinued following its replacement by the Consumer Price Index in June quarter 1960.

An index of retail price movements from 1901 to 1972 is shown on page 234 of this Year Book. It is derived by linking together successive indexes (the 'A' Series, the 'C' Series and the Consumer Price Index) available for that period.

In 1937 the Commonwealth Court of Conciliation and Arbitration introduced a 'Court' Index for the purpose of its system of making automatic quarterly adjustments to the basic wage within its jurisdiction. By decision of the Court the 'Court' Index ceased to be issued by the Industrial Registrar as at December quarter 1953. These 'Court' Index numbers were an arithmetical conversion of the 'C' Series Retail Price Index.

## Consumer Price Index

This retail price index was first compiled in 1960, retrospectively to September quarter 1948. A full description of the index is given in *Labour Report* No. 56, 1971.

### Origin

The list of component items and the weighting pattern of the 'C' Series Retail Price Index, first adopted in 1921, were slightly revised by a Conference of Statisticians in 1936, but otherwise continued almost unchanged until the index was discontinued in 1960. The reasons for this and the circumstances which led to the present Consumer Price Index appear from ensuing paragraphs.

From the outbreak of war in 1939 to late in 1948, periodic policy changes in regard to various war-time controls (including rationing) caused recurrent changes in consumption and in the pattern of expenditure. This rendered changes desirable, but made it impracticable either to produce a new index, or to revise the old one, on any basis that would render the index more representative than it already was of the changing pattern of household expenditure in those years.

When commodity rationing had virtually ceased in the latter part of 1948, action was taken by the Statistician to collect price data of about 100 additional items and to gather information about current consumption and expenditure patterns. This was done to facilitate review of the component items and weighting system of the 'C' Series Retail Price Index in the light of the new pattern of wage-earner expenditure and consumption that appeared to be emerging. But there supervened, in the next few years, conditions which caused wide price dispersion coupled with a very rapid rise in prices and a new sequence of changes in consumption and in the pattern of wage-earner expenditure. Under these conditions it was not possible to devise any new weighting pattern likely to be more continuously representative of conditions then current than was the existing 'C' Series Retail Price Index on the 1936 revision.

A Conference of Statisticians considered the matter in June 1953, and resolved (in part) as follows:

- (a) that, in view of the persistence of recurrent changes in the pattern of consumer expenditure in the post-war period it is undesirable to make a general revision of the list of items and weighting system of the 'C' Series Retail Price Index at present, unless industrial tribunals expressly desire some revision for special purposes;
- (b) that an Interim Retail Price Index be compiled with putative weights and components representative, as nearly as may be, of the post-war pattern of consumer usage and expenditure.

The 'C' Series Index continued to be compiled on its pre-war basis without significant change in procedures. The Interim Retail Price Index was introduced in 1954 and continued until March quarter 1960.

The Interim Index was a transitional index designed to measure retail price variations on the 'C' Series model in terms of post-war consumption weights as emerging in the early 1950's. It embraced a wider range of commodities and services than did the 'C' Series Retail Price Index, but it did not take into account successive major changes in the pattern of expenditure and modes of living that began to occur early in 1950 and through to 1960. These changes could not in fact be detected and measured promptly and incorporated into an index concurrently with their happening. Nor was it envisaged as desirable to adopt fundamentally new procedures in price index construction until it was fully evident that far-reaching procedural changes were necessary to meet the situation that had developed between about 1950 and 1960.

In this period home-owning largely replaced house-renting, the use of the motor car greatly increased and partly replaced use of public transport, and various items of electrical household equipment and television came into widespread use. The impact of these (and other) changes in usage upon the pattern of household expenditure was heightened by disparate movements in prices. Together, they rendered nugatory the attempt to meet the situation by devising a single Interim Retail Price Index. As studies progressed and new data became available it was clear that no single list of items and no single set of fixed weights would be adequately representative as a basis for measuring retail price changes at all times throughout the post-war period. In consequence, the situation was met by compiling the Consumer Price Index constructed as a chain of linked indexes with significant changes in composition and weighting effected at short intervals.

### **Purpose, scope and composition**

The Consumer Price Index is a quarterly measure of variations in retail prices for goods and services representing a high proportion of the expenditure of wage-earner households. The weighting pattern relates to estimated aggregates of wage-earner household expenditures and not to estimated expenditure of an 'average' or individual household of specified size, type, or mode of living. In this way it is possible to give appropriate representation to owner-occupied houses as well as rented houses and to include motor cars, television sets, and other major expenditures which relate to some households and not to others.

Consumer (retail) price indexes are sometimes loosely called 'cost of living indexes' and are thought to measure changes in the 'cost of living'. Neither the Consumer Price Index nor any other retail price index measures those changes in the cost of living that result directly from changes in the mode or level of living. Changes of that kind are matters for consideration apart from price indexes, but the change in prices of goods and services is a very important part of the change in the cost of living and this part is measured by consumer (retail) price indexes.

The Consumer Price Index covers a wide range of commodities and services arranged in the following five major groups:

- Food;
- Clothing and drapery;
- Housing;
- Household supplies and equipment;
- Miscellaneous.

These groups do not include every item of household spending. It is both impracticable and unnecessary for them to do so. Prices are collected regularly for specified quantities and qualities of a large and representative selection of commodities and services. Movements in the prices of these items, when combined in suitable proportions, provide a representative measure of price change as affecting a high proportion of the expenditure of wage-earner households.

Index numbers for sub-groups and special groupings have been compiled and published for the six State capital cities combined for each quarter from December quarter 1963. From December quarter 1968 onwards, information of contributions by index sub-groups to the total index in terms of All Groups Index Points has also been published. These details are shown in the tables on pages 31 to 33 of *Labour Report* No. 56, 1971.

Users of these figures should bear in mind that the Consumer Price Index is designed to measure the proportionate change in retail prices as combined in the five major groups and more particularly the total of the groups. For sub-groups or particular items, the index does not necessarily provide comprehensive and valid measures of price changes in those particular fields. Nor does it necessarily measure the relative influences of those classes of items in aggregate variations in prices. The Consumer Price Index is essentially a combination of selected items under various headings and not a dissection of total household expenditure into its component parts. Details of index numbers for sub-groups and special groupings are published to assist interpretation of movements shown by the Consumer Price Index and also to provide additional data of changes in retail prices.

### **Structure—a chain of linked indexes**

Substantial changes have occurred in consumer usage and patterns of expenditure since the 1939–45 War. In order to keep the weighting pattern representative of current expenditures it has been necessary to construct indexes with additional items and changes in the weighting pattern at intervals, rather than on the basis of a list of items and set of weights that remained unchanged throughout the whole period covered. For the six State capital cities six series for short periods (namely, from the September quarter of 1948 to the June quarter of 1952, from the June quarter of 1952 to the June quarter of 1956, from the June quarter of 1956 to the March quarter of 1960, from



the March quarter of 1960 to the December quarter of 1963, from the December quarter of 1963 to the December quarter of 1968, and from the December quarter of 1968 onwards) have therefore been constructed and linked to form a continuous retail price index series known as the Consumer Price Index. (For information regarding these links for Canberra see *Labour Report* No. 56, 1971.)

During each period between links the items and weighting remained unchanged. At times of linking the weighting pattern was altered, and new items (mainly ones that had become significant in household expenditure) were introduced. Under this method, in effect, average percentage price movements are assessed on one pattern up to the time of the link and on another pattern thereafter. The process of linking ensures that the series reflects only price variations and not differences in cost of the old and new lists of items. The introduction of new items and weights by linking does not, of itself, raise or lower the level of the index.

### **Tabular statements of retail price index numbers**

#### **Consumer Price Index**

The index has been compiled for each quarter from September quarter 1948 and for each year from 1948-49. 'All Groups' index numbers and 'Group' index numbers for each of the five major groups are compiled and published regularly for the six State capital cities combined and separately and for Canberra. Index numbers for sub-groups and special groupings of the Consumer Price Index for the six State capital cities combined have been compiled and published for each quarter from December quarter 1963 and for each year from 1966-67. The reference base for these indexes is: Year 1966-67 = 100.0.

Index numbers for each quarter are first issued in mimeographed statistical bulletins available from the Commonwealth Statistician about three weeks after the end of the quarter. These bulletins contain comment on the index and on significant price movements in that quarter. Tables showing index numbers for preceding quarters and years are presented.

The tables on the following pages show Consumer Price Index Numbers (Total All Groups) for the six State capital cities combined and separately and for Canberra for periods from the year 1955-56 (see page 231), Consumer Price Index Group Index Numbers for the six State capital cities combined for periods from the year 1955-56 (see page 232), and Consumer Price Index Group Index Numbers for each State capital city and for Canberra for recent years and quarters (see page 233).

**CONSUMER PRICE INDEX: ALL GROUPS INDEX NUMBERS  
SIX STATE CAPITAL CITIES AND CANBERRA, YEARS 1955-56 TO 1971-72  
AND QUARTERS MARCH 1968 TO DECEMBER 1972**

*(Base of each index: Year 1966-67 = 100.0) (a)*

The separate city indexes measure price movements within each city individually. They do not compare price levels as between cities.

*State capital cities—combined and separately*

<i>Period</i>	<i>Six State capital cities(b)</i>	<i>Sydney</i>	<i>Mel- bourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Canberra</i>
<b>Year—</b>								
1955-56 . . .	77.0	77.5	76.8	73.8	78.1	78.3	78.1	80.2
1956-57 . . .	81.5	82.8	81.0	77.8	81.2	81.8	82.8	84.3
1957-58 . . .	82.3	84.0	81.3	79.4	81.8	82.4	82.9	84.8
1958-59 . . .	83.6	84.6	82.9	82.1	83.6	83.2	84.1	85.8
1959-60 . . .	85.7	86.5	85.3	84.2	86.2	84.8	85.6	87.6
1960-61 . . .	89.2	89.6	89.5	87.1	89.8	87.9	90.3	90.3
1961-62 . . .	89.6	89.9	89.8	88.4	89.5	88.2	90.7	91.6
1962-63 . . .	89.8	90.4	89.7	88.7	89.1	88.7	90.7	91.8
1963-64 . . .	90.6	91.4	90.4	89.6	90.2	89.8	91.7	92.5
1964-65 . . .	94.0	94.5	94.0	93.0	93.9	92.6	94.6	95.3
1965-66 . . .	97.4	97.7	97.5	97.5	97.0	96.1	98.0	98.1
1966-67 . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . .	103.3	103.2	103.7	103.3	102.9	102.9	104.6	102.6
1968-69 . . .	106.0	106.2	106.2	105.5	105.3	105.5	106.1	104.4
1969-70 . . .	109.4	110.6	108.7	108.4	108.2	109.4	108.5	107.4
1970-71 . . .	114.6	116.8	113.1	114.2	112.5	114.1	112.6	113.0
1971-72 . . .	122.4	126.3	119.7	121.6	119.2	120.7	119.9	119.4
<b>Quarter—</b>								
1968—March . .	103.4	103.2	103.8	103.7	102.6	103.1	104.6	102.6
June . . .	104.2	104.0	104.8	103.7	104.2	104.0	104.6	103.2
September . .	104.6	104.4	105.1	104.7	104.2	104.3	105.0	103.5
December . . .	105.7	105.9	106.0	105.3	105.2	104.9	105.8	103.9
1969—March . .	106.4	106.7	106.6	105.8	105.5	105.6	106.5	104.8
June . . .	107.2	107.6	107.2	106.3	106.4	107.0	107.0	105.2
September . .	107.8	108.4	107.6	107.2	106.9	107.7	107.4	106.0
December . . .	108.7	109.6	108.3	107.9	107.3	108.7	108.1	106.7
1970—March . .	109.8	111.3	108.9	108.9	108.4	109.9	108.9	108.0
June . . .	111.2	112.9	110.1	109.7	110.0	111.4	109.6	109.0
September . .	111.9	113.9	110.7	111.1	109.9	111.6	110.2	109.7
December . . .	114.0	116.2	112.6	113.3	111.8	113.5	112.4	113.2
1971—March . .	115.2	117.4	113.7	115.1	112.9	114.8	113.2	113.6
June . . .	117.2	119.8	115.2	117.2	115.4	116.4	114.6	115.6
September . .	119.4	123.3	116.5	119.0	116.5	117.2	116.5	117.2
December . . .	122.2	126.0	119.7	121.3	119.1	120.5	120.3	119.4
1972—March . .	123.4	127.3	120.7	122.6	120.2	121.8	120.9	119.9
June . . .	124.5	128.5	121.9	123.6	121.1	123.1	122.0	120.9
September . .	126.2	130.3	123.6	124.6	123.0	124.8	123.4	122.6
December . . .	127.7	132.0	125.0	126.6	124.3	125.3	125.1	124.5

(a) Figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted to avoid distortions that would occur in rounding off the figures to the nearest whole number. (b) Weighted average.

**CONSUMER PRICE INDEX: GROUP INDEX NUMBERS**  
**WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES, YEARS 1955-56 TO 1971-72**  
**AND QUARTERS MARCH 1968 TO DECEMBER 1972**

(Base of each index: Year 1966-67 = 100.0) (a)

Period	Food	Clothing and drapery	Housing	Household supplies and equipment	Miscel- laneous	All groups
<b>Year—</b>						
1955-56 . . . .	77.8	85.4	64.2	88.3	71.1	77.0
1956-57 . . . .	81.5	86.9	68.1	92.0	79.3	81.5
1957-58 . . . .	80.1	89.5	71.0	93.4	80.4	82.3
1958-59 . . . .	81.6	90.5	72.9	94.4	81.4	83.6
1959-60 . . . .	84.7	91.5	75.4	95.4	83.2	85.7
1960-61 . . . .	90.2	93.4	80.8	96.6	85.5	89.2
1961-62 . . . .	88.6	94.4	84.0	97.9	86.1	89.6
1962-63 . . . .	87.8	94.7	86.5	97.7	86.6	89.8
1963-64 . . . .	89.0	95.3	89.1	96.4	87.3	90.6
1964-65 . . . .	93.9	96.8	92.0	97.2	91.4	94.0
1965-66 . . . .	98.4	97.9	95.9	98.9	95.8	97.4
1966-67 . . . .	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . . .	104.7	102.2	104.5	101.2	102.8	103.3
1968-69 . . . .	105.8	104.3	109.1	102.9	107.5	106.0
1969-70 . . . .	108.1	107.5	115.5	104.1	111.6	109.4
1970-71 . . . .	112.4	111.9	123.5	107.4	117.8	114.6
1971-72 . . . .	116.8	118.5	133.0	111.7	131.0	122.4
<b>Quarter—</b>						
1968—March . . .	104.6	102.3	104.7	101.1	103.1	103.4
June . . . .	105.6	102.8	106.0	101.9	103.6	104.2
September . . .	105.3	103.3	106.7	102.1	105.1	104.6
December . . . .	105.5	104.1	108.7	102.7	107.3	105.7
1969—March . . .	105.7	104.4	109.7	103.0	108.5	106.4
June . . . .	106.6	105.2	111.2	103.7	108.9	107.2
September . . .	106.6	106.0	112.8	103.7	110.0	107.8
December . . . .	107.1	107.2	114.7	103.9	110.9	108.7
1970—March . . .	108.7	107.9	116.2	104.0	112.0	109.8
June . . . .	110.1	108.9	118.3	104.7	113.5	111.2
September . . .	110.9	109.2	120.2	105.4	113.7	111.9
December . . . .	112.0	110.9	122.7	106.6	117.5	114.0
1971—March . . .	112.3	112.2	124.4	107.8	119.4	115.2
June . . . .	114.3	115.1	126.8	109.8	120.7	117.2
September . . .	115.6	115.7	128.8	110.0	125.7	119.4
December . . . .	116.7	118.0	132.4	111.3	131.2	122.2
1972—March . . .	117.5	118.8	134.1	112.5	132.8	123.1
June . . . .	117.5	121.3	136.6	113.0	134.1	124.5
September . . .	120.1	122.2	138.5	113.7	135.6	126.2
December . . . .	121.6	124.3	141.3	114.5	136.5	127.7

(a) Figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted to avoid distortions that would occur in rounding off the figures to the nearest whole number.



**CONSUMER PRICE INDEX: GROUP INDEX NUMBERS**  
**SIX STATE CAPITAL CITIES AND CANBERRA, YEARS 1948-49 TO 1971-72**  
**AND QUARTERS MARCH TO DECEMBER 1972**

*(Base of each index: Year 1966-67 = 100.0) (a)*

The index numbers hereunder are designed to measure movements in retail prices of specified groups of items for specified cities individually. They measure variations from time to time and not differences in price level as between cities.

City	Year						1972			
	1948-49	1967-68	1968-69	1969-70	1970-71	1971-72	March quarter	June quarter	Sept. quarter	Dec. quarter
<b>FOOD GROUP</b>										
Six State Capitals(b)	38.2	104.7	105.8	108.1	112.4	116.8	117.5	117.5	120.1	121.6
Sydney . . .	37.9	103.9	104.9	107.8	112.8	117.5	118.0	117.7	120.8	122.5
Melbourne . .	38.9	106.3	107.3	109.1	112.7	116.8	117.5	117.7	119.8	121.1
Brisbane . . .	36.8	103.7	104.7	107.7	113.5	119.0	119.7	119.7	120.6	123.8
Adelaide . . .	38.6	104.7	106.4	107.1	109.5	113.6	114.5	114.1	117.5	118.7
Perth . . . . .	38.4	102.9	104.5	108.1	112.5	116.4	117.0	118.5	121.2	120.6
Hobart . . . .	39.1	106.8	105.3	106.4	109.6	112.9	113.5	113.9	115.9	117.9
Canberra . . .	37.6	104.3	105.1	107.0	110.7	114.9	115.0	115.2	118.1	119.9

**CLOTHING AND DRAPERY GROUP**

Six State Capitals(b)	48.9	102.2	104.3	107.5	111.9	118.5	118.8	121.3	122.2	124.3
Sydney . . . .	49.0	102.2	104.2	107.5	112.0	118.7	119.1	121.5	122.4	124.4
Melbourne . .	48.6	102.1	104.2	107.4	111.5	117.9	118.3	120.9	121.9	123.7
Brisbane . . .	47.8	102.4	104.3	107.3	111.7	118.0	118.5	120.6	121.6	124.0
Adelaide . . .	49.4	102.2	104.5	108.1	112.6	119.5	119.8	122.5	123.3	125.6
Perth . . . . .	50.6	102.1	104.5	107.8	112.3	118.9	119.2	121.6	122.4	124.6
Hobart . . . .	48.2	102.4	104.5	107.9	111.9	118.5	118.7	121.1	121.8	124.6
Canberra . . .	49.5	102.3	104.2	107.5	111.7	118.2	118.7	121.2	122.0	124.1

**HOUSING GROUP**

Six State Capitals(b)	40.5	104.5	109.1	115.5	123.5	133.0	134.1	136.6	138.5	141.3
Sydney . . . .	41.1	105.0	110.5	119.9	131.6	143.2	144.6	147.8	150.0	153.4
Melbourne . .	41.3	103.8	107.9	112.2	117.8	124.9	125.6	127.9	129.5	132.0
Brisbane . . .	41.3	105.8	109.6	113.4	118.3	128.8	129.6	131.7	133.6	135.6
Adelaide . . .	38.4	102.1	104.7	109.3	115.9	124.4	125.8	127.8	129.7	132.5
Perth . . . . .	36.1	105.8	112.7	120.1	125.7	133.7	135.4	136.7	137.4	139.4
Hobart . . . .	36.8	103.6	108.4	112.6	117.4	124.2	125.3	126.8	128.3	131.6
Canberra . . .	41.8	100.4	101.9	104.6	116.3	121.9	122.7	124.0	124.7	128.5

**HOUSEHOLD SUPPLIES AND EQUIPMENT GROUP**

Six State Capitals(b)	58.3	101.2	102.9	104.1	107.4	111.7	112.5	113.0	113.7	114.5
Sydney . . . .	59.7	101.2	103.0	104.8	109.3	114.6	115.5	116.1	116.6	117.5
Melbourne . .	55.0	101.4	102.9	103.5	105.8	108.9	109.3	110.0	110.6	111.2
Brisbane . . .	58.9	101.2	104.3	105.5	108.5	112.7	113.2	114.1	114.8	116.4
Adelaide . . .	64.9	100.3	101.1	102.0	105.4	109.2	109.6	110.0	110.9	111.6
Perth . . . . .	60.4	100.7	102.1	103.7	107.7	112.7	114.9	114.7	115.5	116.2
Hobart . . . .	53.4	102.9	104.5	106.1	109.2	116.4	117.7	118.1	118.9	119.6
Canberra . . .	61.4	100.4	100.6	101.9	104.7	107.5	107.7	108.3	109.5	110.6

**MISCELLANEOUS GROUP**

Six State Capitals(b)	44.7	102.8	107.5	111.6	117.8	131.0	132.8	134.1	135.6	136.5
Sydney . . . .	46.5	103.0	108.5	113.7	120.3	137.4	139.3	140.7	141.8	142.8
Melbourne . .	42.2	102.5	107.3	110.2	115.8	127.1	129.2	130.3	132.5	133.6
Brisbane . . .	44.4	103.2	106.0	109.2	117.3	127.7	129.4	130.6	131.3	131.9
Adelaide . . .	47.1	102.6	107.0	112.0	118.1	128.3	129.7	131.2	132.4	132.8
Perth . . . . .	45.4	103.2	105.6	109.8	114.8	124.5	126.3	127.1	129.0	129.4
Hobart . . . .	43.5	104.5	108.0	111.0	116.6	129.3	130.8	132.1	133.5	134.0
Canberra . . .	50.2	103.0	107.0	112.4	119.3	130.4	131.6	132.7	134.0	135.4

(a) Figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted to avoid distortions that would occur in rounding off the figures to the nearest whole number. (b) Weighted average.

### Retail Price Index Numbers, 1901 to 1972

The index numbers shown below are presented as a continuous series, but they give only a broad indication of long-term trends in retail price levels. They are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are; from 1901 to 1914, the 'A' Series Retail Price Index; from 1914 to 1946-47, the 'C' Series Retail Price Index; from 1946-47 to 1948-49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series Index excluding Rent; and from 1948-49 onwards, the Consumer Price Index.

#### RETAIL PRICE INDEX NUMBERS: SIX STATE CAPITAL CITIES COMBINED, 1901 TO 1972

(Base: Year 1911 = 100)

Year	Index number	Year	Index number	Year	Index number
1901	88	1925	165	1949	240
1902	93	1926	168	1950	262
1903	91	1927	166	1951	313
1904	86	1928	167	1952	367
1905	90	1929	171	1953	383
1906	90	1930	162	1954	386
1907	90	1931	145	1955	394
1908	95	1932	138	1956	419
1909	95	1933	133	1957	429
1910	97	1934	136	1958	435
1911	100	1935	138	1959	443
1912	110	1936	141	1960	459
1913	110	1937	145	1961	471
1914(a)	114	1938	149	1962	469
1915(a)	130	1939	153	1963	472
1916(a)	132	1940	159	1964	483
1917(a)	141	1941	167	1965	502
1918(a)	150	1942	181	1966	517
1919(a)	170	1943	188	1967	534
1920(a)	193	1944	187	1968	548
1921(a)	168	1945	187	1969	564
1922(a)	162	1946	190	1970	586
1923	166	1947	198	1971	621
1924	164	1948	218	1972	658

(a) November.

### International comparisons

The following table shows index numbers of consumer (retail) prices for various countries. Except where otherwise noted, the year 1963 is taken as base (= 100). The index numbers show fluctuations in prices in each country, and do not measure relative price levels as between countries.

# INDEX NUMBERS OF CONSUMER (RETAIL) PRICES IN VARIOUS COUNTRIES ALL GROUPS INDEXES, 1965 TO 1972

(Source: Monthly Bulletin of Statistics of the Statistical Office of the United Nations)  
(Base of each index: year 1963 = 100)

Period	Australia (a)	Belgium (b)	Brazil (Sao Paulo) (c)	Canada	France	Federal Republic of Germany	India (d)	Indonesia (Dja- karta)	Italy	Japan	Nether- lands (e)
1965	106	108	302	104	106	106	124	830	111	111	111
1966	110	-113-	443	108	109	110	137	9,502	-113-	116	117
1967	113	116	574	112	112	111	156	25,612	118	121	-121-
1968	-116-	119	714	117	117	113	160	57,712	119	128	126
1969	120	124	879	122	124	116	175	61,250	122	134	135
1970	124	129	1,047	126	-131-	121	184	68,807	128	-144-	141
1971	132	134	1,268	130	138	127	190	71,797	-134-	153	-152-
1972	139	142	111	136	147	134	202	76,463	142	160	164
Quarter— 1972—											
March	137	139	104	133	143	131	194	74,457	139	157	159
June	138	140	107	134	145	133	197	74,055	140	160	163
Sept.	140	143	112	137	147	135	207	76,460	143	161	164
Dec.	142	145	117	138	150	137	210	84,221	145	163	167

Period	New Zealand	Norway	Pakistan (Karachi) (f)	Philip- pines (Manila)	Singa- pore(g)	Republic of South Africa(h)	Sweden	Switzer- land	United Kingdom	United States of America	West Malay- sia(g)
1965	-107-	110	110	109	102	106	109	107	108	103	100
1966	110	114	118	114	104	110	116	-112-	113	106	101
1967	117	119	126	122	107	114	121	116	115	109	105
1968	122	123	126	122	108	116	123	119	121	114	105
1969	128	127	130	126	108	119	126	122	127	120	104
1970	136	140	137	133	108	-125-	135	126	135	127	106
1971	150	149	144	156	110	133	145	135	148	132	107
1972	161	160	156	187	113	142	154	144	159	137	
Quarter— 1972—											
March	158	155	148	176	112	138	151	141	154	135	110
June	160	158	153	182	111	140	153	142	157	136	110
Sept.	161	162	160	197	113	143	155	144	160	137	110
Dec.	163	164	164	191	115	146	157	148	164	138	

(a) Consumer Price Index converted to base: 1963 = 100. (b) Rent is not included. (c) Beginning March 1972, new index, base: December 1971 = 100. (d) Beginning March quarter 1969, new index, base: 1960 = 100. (e) Excluding compulsory social insurance and wage tax. (f) Industrial workers. (g) All races. (h) White population.

NOTE. Symbol — on each side of an index number (e.g. -95-) indicates that two series have been linked during that period. Symbol — between two index numbers indicates that it is not possible to link two series (because of change in scope, etc.) and therefore the index numbers are not comparable with each other even though they may be shown on the same base period.

## WHOLESALE PRICES AND PRICE INDEXES

Two indexes of wholesale prices of basic materials have been compiled by the Commonwealth Bureau of Census and Statistics. These are:

- the Melbourne Wholesale Price Index;
- the Wholesale Price (Basic Materials and Foodstuffs) Index.

New series of wholesale price index numbers relating to materials used and articles produced by defined areas of the economy are being developed. Three such indexes have already been published. They are the Price Index of Materials used in Building other than House Building (issued April 1969), the Price Index of Materials used in House Building (issued November 1970) and the Price Index of Metallic Materials Used in the Manufacture of Fabricated Metal Products (issued December 1972). Work continues on the preparation of further measures.

Two special purpose measures, the Price Index of Electrical Installation Materials and Price Indexes of Copper Materials Used in the Manufacture of Electrical Equipment, are also published by the Bureau.

## Melbourne Wholesale Price Index

An index of Melbourne wholesale prices was first compiled in 1912. It related chiefly to basic material and foods weighted in accordance with consumption in the years immediately preceding that year. Neither the list of items nor the weighting was varied, except for some changes in the building materials group in 1949. The series has some historical significance as a measure of changes, since the year 1861, in the prices of its component items combined in the proportions in which they were in common use about the year 1910. A description of the index and a list of the commodities included in it were published in *Labour Report* No. 38, 1949, pages 43-5. Index numbers up to the year 1961, the last period for which the index was compiled, were published in Year Book No. 48, 1962.



### Wholesale Price (Basic Materials and Foodstuffs) Index

General publication of this index was discontinued with the issue of index numbers for the month of December 1970. Index numbers up to that period may be found in the mimeographed bulletin *Wholesale Price (Basic Materials and Foodstuffs) Index* (9.4) or in the printed publications *Monthly Review of Business Statistics* and *Quarterly Summary of Australian Statistics*.

The index related to commodities priced in their primary or basic form wherever possible and as nearly as might have been at the point where they first made effective impact on the local price structure. With a few exceptions, prices were from Melbourne sources. The weights were based on estimates of the average annual consumption of the commodities in Australia during the period 1928–29 to 1934–35 inclusive.

A list of the commodities and other information concerning the Wholesale Price (Basic Materials and Foodstuffs) Index is given in *Labour Report No. 53*, 1967, pages 38–41.

### Wholesale Price Index of Electrical Installation Materials

This special purpose index was introduced in 1964, and index numbers were published at quarterly intervals from August 1959 to February 1969, when monthly publication commenced. In addition to its use in connection with the Bureau's constant price estimates in the national accounting field, the index has a direct value as a measure of changes in aggregate cost of materials used in an important part of the building industry (other than house building).

A description of this index is given in Year Book No. 58, 1972, pages 239–40. Index numbers are published monthly in *Wholesale Price Indexes—Price Index of Electrical Installation Materials* (9.5).

### Wholesale Price Index of Materials used in Building other than House Building

#### General

This index was introduced in April 1969 and relates to the construction of buildings other than houses. Further information concerning the method of compiling the index, as well as more detailed group index numbers for each capital city, will be found in the publication *Price Index of Materials used in Building other than House Building* (9.6) of 23 April 1969 and subsequent issues, as well as in the *Labour Report No. 56*, 1971.

#### Scope and composition

The index measures changes in prices of selected materials used in the construction of buildings other than houses and 'low-rise' flats (in general, those up to three storeys). Its composition is in accordance with the materials usage in actual building projects which were selected as representative for the purpose.

The index includes 72 items, combined in eleven groups, in addition to an 'All groups' index. Some items carry the weights of similar items not directly priced. Items are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality.

Although the selected materials (or many of them) are also used in house (and low-rise flat) building, in building repair, maintenance and alteration work, and in 'engineering construction' work (e.g. projects such as roads, dams, bridges and the like), the weighting pattern of the index, being designed for the specific purpose mentioned in the first paragraph of this section, is not applicable to these other activities of the Construction industry. In addition, since the weights are based on an average materials usage over a range of building 'use-types' (e.g. office building, factory, etc.), the index is not necessarily applicable to any specific building or any particular type of building.

#### Base period and method of calculation

The reference base of the index is the year 1966–67 = 100.0. The weighting base corresponds broadly with the reference base, but does not exactly coincide because of the nature of the data from which the weights were derived.

The index is a fixed-weights index and is calculated by the method known as 'the weighted arithmetic mean of price relatives'.

#### Derivation of items and weights

The items and weights used in the index were derived from reported values of each material used in selected representative buildings constructed in or about 1966–67. The selection took account of building use-type and construction characteristics (e.g. type of frame, wall, floor, etc.) within use-types. Information of the former was obtained from building statistics, and of the latter from an *ad hoc* survey of approximately 800 buildings.

### The weights

The weighting pattern used in the index given in Year Book No. 55, 1969, pages 1259-60, as well as in the publications referred to in the paragraph under General above. This single weighting pattern, relating to the whole of Australia, is applied (with minor exceptions) to local price measures in calculating indexes for each State capital city.

The index for the six State capital cities combined is a weighted average of individual city indexes. The relative weighting of the capitals is in proportion to the estimated value on completion of building other than house building in the separate States during the three years ended June 1967.

### Prices

Prices are collected as at the mid-point of the month to which the index refers, or as near thereto as practicable. They relate to specified standards of each commodity and are obtained in all State capital cities from representative suppliers of materials used in building. In general the point of pricing is 'delivered on site' but in some cases it has been necessary to use the nearest realistic price available, e.g. that for 'supplied and fixed'. Local prices are used in the indexes for each capital city with the main exception that, for the whole of the group Electrical installation materials and the majority of the items in the group Mechanical services components, Sydney and Melbourne price series are used.

### Index numbers

The index has been compiled for each month from July 1966, and for the financial years from 1966-67. Index numbers for the individual groups and all groups for the weighted average of the six State capital cities, and for all groups combined for each State capital city, are given in the following tables. Figures are published to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

The separate city indexes measure price movements in each State capital city individually. They enable comparisons to be drawn between capitals as to differences in degree of price movement from period to period, but not as to differences in price level.

In interpreting movements in the index, particularly those from month to month, it should be noted that changes frequently occur in an uneven fashion both over time and also for separate capital cities, as between the same points of time. Changes in index numbers for individual months should not be interpreted in isolation and without reference to changes over longer periods.

WHOLESALE PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN  
HOUSE BUILDING  
GROUP INDEX NUMBERS—WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES  
YEARS 1967-68 TO 1971-72 AND MONTHS JULY TO DECEMBER 1972

(Base of each Index: Year 1966-67 = 100.0)(a)

Period	Concrete mix, cement, sand, etc.	Cement products	Bricks, stone, etc.	Timber, board and joinery	Steel and iron products	Aluminium products
1967-68 . . .	101.5	102.2	103.7	103.0	102.3	101.4
1968-69 . . .	103.5	106.8	108.2	107.2	106.1	103.9
1969-70 . . .	106.9	111.7	112.6	111.2	110.1	107.4
1970-71 . . .	113.0	118.0	118.6	117.0	115.8	113.0
1971-72 . . .	120.6	126.1	124.2	123.4	125.4	119.3
1972-73—						
July . . .	120.7	131.9	126.3	127.1	127.9	121.4
August . . .	120.2	132.3	127.0	127.5	128.0	122.3
September . . .	120.8	132.4	127.8	127.8	128.1	122.9
October . . .	119.9	133.9	128.1	128.9	128.5	123.6
November . . .	118.8	134.0	128.4	130.0	128.9	123.9
December . . .	125.4	134.1	129.3	130.9	129.0	124.1

**WHOLESALE PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN  
HOUSE BUILDING**  
**GROUP INDEX NUMBERS—WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES**  
**YEARS 1967-68 TO 1971-72 AND MONTHS JULY TO DECEMBER 1972—continued**

<i>Period</i>	<i>Other metal products</i>	<i>Plumbing fixtures</i>	<i>Miscel- laneous materials</i>	<i>Electrical installation materials</i>	<i>Mechanical services components</i>	<i>All groups</i>
1967-68 . . .	105.9	102.8	102.3	100.9	101.4	102.2
1968-69 . . .	106.8	103.3	103.2	102.1	107.7	105.6
1969-70 . . .	126.3	113.7	105.8	112.2	111.8	110.5
1970-71 . . .	121.4	121.3	110.3	110.9	119.0	115.5
1971-72 . . .	120.6	134.3	116.9	114.7	127.7	123.0
1972-73—						
July . . .	122.0	141.9	120.8	117.6	130.7	125.7
August . . .	122.0	141.8	120.7	117.8	130.9	125.9
September . . .	122.1	141.5	121.6	117.8	130.9	126.1
October . . .	122.1	141.6	122.4	118.1	132.4	126.7
November . . .	122.1	141.7	122.9	119.0	132.9	127.0
December . . .	122.1	141.7	124.0	119.2	132.6	128.0

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

**WHOLESALE PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN  
HOUSE BUILDING**

**ALL GROUPS INDEX NUMBERS—SIX STATE CAPITAL CITIES**  
**YEARS 1967-68 TO 1971-72 AND MONTHS JULY TO DECEMBER 1972**

(Base of each Index: Year 1966-67 = 100.0) (a)

NOTE. The separate city indexes measure price movements within each city individually. They do not compare price levels as between cities.

<i>Period</i>	<i>State capital cities</i>						<i>Weighted average of six State capital cities</i>
	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	
1967-68 . . .	102.6	101.7	102.2	101.8	102.0	102.3	102.2
1968-69 . . .	106.5	105.0	105.1	105.0	104.7	105.1	105.6
1969-70 . . .	111.7	109.8	110.3	109.4	108.9	109.7	110.5
1970-71 . . .	116.4	115.1	116.4	113.9	113.3	115.0	115.5
1971-72 . . .	122.4	123.9	124.4	122.7	121.3	122.6	123.0
1972-73—							
July . . .	123.6	128.0	127.6	126.5	123.9	127.2	125.7
August . . .	123.6	128.3	127.7	126.7	124.2	127.4	125.9
September . . .	124.1	128.6	127.9	126.9	124.1	127.4	126.1
October . . .	124.6	129.2	128.0	127.8	124.4	127.7	126.7
November . . .	124.9	129.7	128.6	128.1	124.8	127.9	127.0
December . . .	126.8	130.0	128.7	128.7	124.9	128.2	128.0

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

## Wholesale Price Index of Materials used in House Building

### General

This index, referring to materials used in house building, was introduced in November 1970 and is complementary to the Price Index of Materials used in Building other than House Building. Further information concerning the method of compiling the Index, as well as more detailed group index numbers and the separate weighting patterns for the six State capital cities, will be found in the publication *Price Index of Materials used in House Building* (9.9) of 27 November 1970. This and subsequent issues are available on request. A full description of the index is also given in *Labour Report* No. 56, 1971.



### Scope and composition

The index measures changes in prices of selected materials used in the construction of houses. Its composition is in accordance with the usage of materials in actual houses which were selected as representative for the purpose. The index does not purport to represent buildings of any kind other than houses. The house building construction types included are those which use brick, brick veneer, timber or asbestos cement sheeting as the principal material for the outer walls.

The numbers of items included in the lists for the respective State capital cities vary between 49 and 51. In all cases the selection of materials was based on local usage. Items are combined in eleven groups in addition to the 'All groups' index. Some items carry the weight of similar items not directly priced. They are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality.

### Base period and method of calculation

In the interests of uniformity and ease of use, the reference base of the index is the year 1966-67 = 100.0, the same as that used for the Price Index of Materials used in Building other than House Building. However, because of the later time at which the weighting source data were collected, the weighting base approximates more closely to the year 1968-69.

The index is a fixed weights index and is calculated by the method known as 'the weighted arithmetic mean of price relatives'.

### Derivation of items and weights

The items and weights used in the index were derived from reported values of each material used in selected representative houses constructed in or about 1968-69 in each State capital city. The selection took account, within the four major construction types, of a range of characteristics of these houses—e.g. internal partitions, windows, roofing, etc., as well as whether such things as paths and fences were included in the job. Information of this nature was obtained from an *ad hoc* survey of some 250 house builders from whom data regarding approximately 900 houses representative of their operations were obtained. The survey was conducted in all State capital cities.

### The weights

The group and item weights used in the index for each State capital city are given in the publications referred to in the paragraph under **General** above. The pattern resulting from their aggregation over the six State capitals is given in *Year Book* No. 57, 1971, pages 236-7 as well as in those publications referred to above.

Each State capital city has a unique weighting pattern which reflects the difference in the estimated relative importance of given items as between cities. The weighting pattern for each capital city is applied to local price measures in calculating indexes for that city.

### Prices

Price series used relate to specified standards of each commodity with the aim of incorporating in the index price changes for representative materials of constant quality. In general the point of pricing is 'delivered on site', but in some cases it has been necessary to use the nearest realistic price available, e.g. that for 'supplied and fixed'. The price series are obtained in all State capital cities from representative suppliers of materials used in house building. In the main they are collected as at the mid-point of the month to which the index refers, or as near thereto as practicable.

### Index numbers

The index has been compiled for each month from July 1966, and for the financial years from 1966-67. Index numbers for the individual groups and all groups for the six State capital cities combined and for all groups combined for each State capital city, are given in the following tables. Figures are published to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

The separate city indexes measure price movements in each State capital city individually. They enable comparisons to be drawn between capitals as to differences in degree of price movement from period to period, but not as to differences in price level.

In interpreting movements in the index, particularly those from month to month, it should be noted that changes frequently occur in an uneven fashion both over time and also for separate capital cities, as between the same points of time. Changes in index numbers for individual months should not be interpreted in isolation and without reference to changes over longer periods.

**WHOLESALE PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING**  
**GROUP INDEX NUMBERS—WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES**  
**YEARS 1967-68 TO 1971-72 AND MONTHS JULY TO DECEMBER 1972**

*(Base of each Index: Year 1966-67 = 100.0) (a)*

<i>Period</i>	<i>Concrete mix, cement and sand</i>	<i>Cement products</i>	<i>Clay bricks, tiles, etc.</i>	<i>Timber, board and joinery</i>	<i>Steel products</i>	<i>Other metal products</i>
1967-68 . . .	101.6	102.8	103.6	103.0	101.9	103.9
1968-69 . . .	103.8	107.0	107.8	108.6	104.8	106.3
1969-70 . . .	107.1	112.6	112.4	113.5	110.0	111.8
1970-71 . . .	113.4	121.8	118.0	118.5	115.0	112.4
1971-72 . . .	121.2	132.0	124.5	124.8	127.9	118.5
1972-73—						
July . . .	122.2	137.2	126.6	129.5	133.9	121.3
August . . .	121.2	137.3	127.4	129.8	133.9	121.5
September . . .	121.5	137.6	128.3	130.2	134.3	122.0
October . . .	126.8	138.4	128.4	132.4	134.5	122.5
November . . .	126.5	138.5	128.5	133.2	134.6	122.9
December . . .	127.3	138.5	129.6	134.8	135.1	123.4

<i>Period</i>	<i>Plumbing fixtures</i>	<i>Electrical instal- lation materials</i>	<i>Installed appli- ances</i>	<i>Plaster and plaster products</i>	<i>Miscel- laneous materials</i>	<i>All groups</i>
1967-68 . . .	101.7	103.3	100.0	101.7	102.9	102.7
1968-69 . . .	102.0	105.2	99.7	103.0	104.5	106.3
1969-70 . . .	108.7	115.8	102.2	105.1	107.4	110.9
1970-71 . . .	113.6	115.0	103.8	109.4	111.0	115.7
1971-72 . . .	122.6	120.2	107.4	116.9	116.4	122.7
1972-73—						
July . . .	128.4	123.8	108.1	118.3	121.0	126.5
August . . .	128.3	123.8	108.1	118.4	121.0	126.6
September . . .	127.9	123.9	108.1	118.4	122.6	127.1
October . . .	128.1	123.9	108.1	118.6	123.2	128.4
November . . .	128.2	123.9	108.0	118.6	123.3	128.7
December . . .	128.5	123.9	108.2	118.7	123.9	129.6

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

**WHOLESALE PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING  
ALL GROUPS INDEX NUMBERS—SIX STATE CAPITAL CITIES, YEARS 1967-68 TO 1971-72  
AND MONTHS JULY TO DECEMBER 1972**

*(Base of each Index: Year 1966-67 = 100.0) (a)*

NOTE. The separate city indexes measure price movements within each city individually. They do not compare price levels as between cities.

Period	State capital cities						Weighted average of six State capital cities
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	
1967-68 . . .	103.4	101.3	103.4	102.1	104.0	101.8	102.7
1968-69 . . .	109.3	103.6	105.6	107.0	105.9	104.1	106.3
1969-70 . . .	115.2	107.2	109.4	112.4	110.3	107.7	110.9
1970-71 . . .	119.8	112.3	115.2	116.7	113.9	114.3	115.7
1971-72 . . .	126.1	118.9	124.8	124.8	121.1	120.7	122.7
1972-73—							
July . . .	128.7	122.6	130.8	129.9	124.3	127.1	126.5
August . . .	128.9	122.7	131.2	130.1	124.3	127.2	126.6
September . . .	129.6	123.0	131.8	130.8	124.5	127.2	127.1
October . . .	133.3	123.2	131.8	131.3	124.7	127.2	128.4
November . . .	133.4	124.0	131.7	131.5	124.8	127.3	128.7
December . . .	134.9	124.9	131.9	133.6	124.8	127.5	129.6

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off index numbers to the nearest whole number.

## Wholesale Price Index of Metallic Materials used in the Manufacture of Fabricated Metal Products

### General

This index, relating to important metallic materials used in the manufacture of fabricated metal products, was introduced in December 1972. In addition to constituting a further step in the publication of an expanded range of wholesale price indexes, this index and the Wholesale Price Index of Copper Materials Used in the Manufacture of Electrical Equipment (*see* page 244) have been designed as a modern replacement for the metals components of the Wholesale Price (Basic Materials and Foodstuffs) Index.

### Scope and Composition

The index includes important metallic materials selected and combined in accordance with a weighting pattern reflecting value of usage as reported at the 1968-69 Census of Manufacturing Establishments for establishments classified to the Fabricated Metal Products Sub-division of Manufacturing Industry (Australian Standard Industrial Classification Sub-division 31).

Index numbers are compiled and published for four groupings of items and for the 'All groups' combination. The materials have been grouped under the headings Iron and steel, Aluminium, Copper and brass, and Other metallic materials.

The composition and weighting pattern of the index is given on page 243.

### Base period and method of calculation

The reference base of the index is the year 1968-69 = 100.0. The index is a fixed weights index and is calculated by the method known as 'the weighted arithmetic mean of price relatives'.

### Prices

Prices for each of the items relate to representative goods of fixed specification collected from a selection of representative sources. In each case, these specifications are sufficiently detailed to ensure that the price changes incorporated in the indexes are measured, as far as possible, on the basis of constant quality.

The price series used are obtained monthly, by mail collection, from major Australian manufacturers of the relevant materials. In the main prices are collected as at the mid-point of each month.

The prices collected are, as far as possible, those normally charged to representative manufacturers for goods delivered into their stores.



## Index numbers

The index has been compiled for each month from July 1968, and for financial years from 1968-69. Index numbers for financial years are simple averages of the relevant monthly index numbers. Index numbers for each group and all groups are given below. In interpreting movements in the index, particularly those from month to month, it should be noted that changes frequently occur in an uneven fashion over time. Changes in index numbers for individual months should not be interpreted in isolation and without reference to changes over longer periods. Figures are published to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

Current index numbers are published monthly in *Wholesale Price Indexes of Metallic Materials* (9.10).

WHOLESALE PRICE INDEX OF METALLIC MATERIALS USED IN THE MANUFACTURE OF  
FABRICATED METAL PRODUCTS—GROUP INDEX NUMBERS—YEARS 1968-69 TO  
1971-72 AND MONTHS JULY 1968 TO DECEMBER 1972

(Base of each index: Year 1968-69 = 100.0)(a)

Period	Iron and steel	Aluminium	Copper and brass	Other metallic materials	All groups
1968-69 . . . .	100.0	100.0	100.0	100.0	100.0
1969-70 . . . .	104.2	102.2	122.5	93.8	104.8
1970-71 . . . .	106.7	104.5	106.5	90.9	106.2
1971-72 . . . .	116.2	106.8	106.2	83.6	114.1
1968-69—July . . . .	98.7	99.5	92.4	114.3	98.7
August . . . .	98.7	99.7	92.4	109.1	98.6
September . . . .	98.7	99.7	92.8	109.6	98.7
October . . . .	98.9	100.0	93.8	99.9	98.7
November . . . .	98.9	100.0	93.8	101.3	98.7
December . . . .	98.9	100.0	97.6	100.2	98.9
January . . . .	100.9	100.0	101.7	100.8	100.9
February . . . .	101.2	100.0	103.3	94.0	101.1
March . . . .	101.3	100.0	103.3	95.1	101.1
April . . . .	101.3	100.1	106.1	93.1	101.3
May . . . .	101.3	100.1	109.3	93.2	101.5
June . . . .	101.4	101.2	113.5	88.2	101.8
1969-70—July . . . .	101.4	101.2	112.2	87.2	101.7
August . . . .	101.4	101.2	117.7	88.4	102.1
September . . . .	102.1	101.2	121.6	93.4	103.0
October . . . .	102.5	101.2	117.6	96.3	103.1
November . . . .	103.0	101.2	120.2	99.2	103.7
December . . . .	103.0	101.6	125.1	94.2	103.9
January . . . .	105.6	101.6	126.4	96.9	106.2
February . . . .	106.1	103.5	124.6	98.2	106.8
March . . . .	106.1	103.5	128.4	97.7	107.0
April . . . .	106.2	103.5	130.9	95.9	107.2
May . . . .	106.4	103.5	126.4	89.5	106.9
June . . . .	106.4	103.6	118.5	88.6	106.4
1970-71—July . . . .	106.4	103.6	113.6	90.4	106.2
August . . . .	106.4	103.6	112.4	94.6	106.3
September . . . .	105.9	103.5	109.0	95.3	105.6
October . . . .	105.9	104.2	107.2	93.1	105.6
November . . . .	105.9	104.4	104.9	93.0	105.5
December . . . .	105.9	104.4	102.3	88.8	105.2
January . . . .	105.9	105.1	102.7	88.7	105.3
February . . . .	106.1	105.1	102.1	87.1	105.3
March . . . .	106.2	105.1	103.2	91.6	105.6
April . . . .	106.3	105.1	108.2	91.8	106.0
May . . . .	107.2	105.2	107.5	89.6	106.6
June . . . .	112.8	105.2	104.8	87.5	111.1

For footnotes see next page.

WHOLESALE PRICE INDEX OF METALLIC MATERIALS USED IN THE MANUFACTURE OF  
FABRICATED METAL PRODUCTS—GROUP INDEX NUMBERS—YEARS 1968-69 TO 1971-72  
AND MONTHS JULY 1968 TO DECEMBER 1972—continued

(Base of each index: Year 1968-69 = 100.0)(a)

Period	Iron and steel	Aluminium	Copper and brass	Other metallic materials	All groups
1971-72—July . . .	113.4	105.3	106.1	89.5	111.7
August . . .	113.6	106.0	109.0	88.7	112.1
September . . .	113.8	106.7	108.5	82.8	112.1
October . . .	113.8	107.7	106.8	78.8	112.1
November . . .	113.8	107.7	106.7	78.0	112.1
December . . .	113.8	107.7	105.1	80.2	112.0
January . . .	113.8	106.8	105.0	82.5	112.0
February . . .	117.4	106.8	105.3	83.0	115.0
March . . .	118.9	106.6	105.6	83.1	116.2
April . . .	120.0	106.6	105.5	84.9	117.4
May . . .	121.1	107.0	105.4	85.8	118.1
June . . .	121.1	107.0	105.2	86.5	118.2
1972-73—July . . .	121.1	107.1	105.1	97.6	118.5
August . . .	121.2	107.1	105.2	99.1	118.5
September . . .	121.2	107.1	104.8	98.4	118.5
October . . .	121.5	108.2	102.5	98.7	118.7
November . . .	121.5	108.2	102.5	101.5	118.8
December . . .	121.6	108.3	102.5	108.1	119.0

(a) Figures are published to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

WHOLESALE PRICE INDEX OF METALLIC MATERIALS USED IN THE MANUFACTURE  
OF FABRICATED METAL PRODUCTS—COMPOSITION AND WEIGHTING  
PATTERN AS AT REFERENCE BASE YEAR: 1968-69

Group and item	Item to group index	Percentage contribution of— Group to All groups index
1. Iron and steel—		83.2
Pig iron . . . . .	0.5	..
Steel bar, flats, rounds, squares and plate (excluding stainless steel) . . . . .	29.8	..
Stainless steel . . . . .	5.4	..
Steel sheet and strip (other than stainless steel and tinplate) . . . . .	23.1	..
Tinplate . . . . .	9.7	..
Wire rod . . . . .	1.7	..
Steel angles, channels, joists, beams and other structural sections . . . . .	11.6	..
Uncoated coiled steel wire (round, strip and sections) . . . . .	8.8	..
Coated (galvanised) coiled steel wire (round, strip and sections) . . . . .	4.5	..
Ferrous pipes and tubes . . . . .	2.7	..
Forgings and castings of iron and steel . . . . .	1.8	..
Electrodes . . . . .	0.4	..
2. Aluminium—		8.9
Aluminium and alloy refinery shapes . . . . .	14.0	..
Aluminium and alloy sections (excluding wire) . . . . .	66.3	..
Aluminium and alloy sheet, plate, strip, circles, slugs, foilstock, etc. . . . .	0.8	..
Aluminium and alloy castings . . . . .	18.9	..
3. Copper and brass—		5.7
Copper and alloy refinery shapes . . . . .	5.3	..
Copper and alloy sections (excluding wire) . . . . .	27.9	..
Copper and alloy sheet, plate, strip, circles, slugs, foilstock, etc. . . . .	1.2	..
Copper and alloy single wire and wire drawn from rod . . . . .	1.6	..
Brass sections (excluding wire) . . . . .	36.8	..
Brass sheet, plate, strip, circles, slugs, foilstock, etc. . . . .	3.6	..
Brass refinery shapes . . . . .	23.6	..
4. Other metallic materials		2.2
Zinc and alloy refinery shapes . . . . .	9.8	..
Zinc and alloy castings . . . . .	13.4	..
Silver . . . . .	76.8	..

## Wholesale Price Indexes of Copper Materials used in the Manufacture of Electrical Equipment

This special purpose measure was introduced in December 1972. In addition to constituting a further step in the publication of an expanded range of wholesale price indexes, it has been designed to supplement the Price Index of Materials Used in the Manufacture of Fabricated Metal Products in providing a replacement for the metals components of the Wholesale Price (Basic Materials and Foodstuffs) Index.

A description of this index is given in *Labour Report* No. 57, 1972. Index numbers are shown in the monthly publication *Price Indexes of Metallic Materials* (9.10).

## EXPORT PRICE INDEXES

An annual index of export prices has been published by the Bureau since its inception. Brief descriptions of indexes issued between 1901 and 1962 (that is, prior to the introduction of the current Export Price Index) are shown in Year Book No. 55, 1969, pages 256-7.

### The current Export Price Index

The current Export Price Index was first published in October 1962, but index numbers were compiled back to July 1959. The reference base of this index is: year 1959-60=100. Index numbers from July 1969 have been compiled on an interim basis which incorporates a re-weighting of the items contained in the original index, and the inclusion of some additional items. This interim basis was introduced pending completion of a comprehensive review and re-basing of the index as a whole.

The Export Price Index is a fixed-weights index, and its purpose (as was that of the previous fixed-weights index) is to provide comparisons monthly, over a limited number of years, of the level of export prices of the selected items, making no allowance for variations in quantities exported. The index numbers are thus measures of price change only. The price series used in the index relate to specified standards for each commodity and in most cases are combinations of prices for a number of representative grades, types, etc. For some commodities price movements in the predominant market, or markets, are used, while for other commodities average realisations in all export markets are used. As nearly as possible, prices used are on the basis f.o.b. at the main Australian ports of export. The index is calculated by the method known as 'the weighted arithmetic mean of price relatives'.

#### Composition and weighting

Over the period of ten years between July 1959 and June 1969, there were twenty-nine items in the export price index, and the weights used to combine these were based on average annual values of exports during the years 1956-57 to 1960-61. The twenty-nine items constituted in excess of 80 per cent of the total value of Australian exports in the earlier part of the ten years mentioned: this percentage, however, decreased markedly in more recent years. A review of the content and weighting pattern of the index was consequently undertaken, and an interim series incorporating some of the results of this review was introduced with effect from July 1969.

#### Interim basis

The interim series is a fixed-weights export price index, compiled monthly as from June 1969, which has been linked at June 1969 to the current index in its original form. The weights of the items in the interim series are derived from the values of exports for the year 1969-70, and the group weights have been adjusted to reflect the proportion that the value of wool bore to the value of all exports in that year. In addition to the twenty-nine items of the current index as first introduced, the interim series includes the four items; iron ore, bauxite, alumina and mineral sands. These items are not attached to any of the original single groups of the index but are incorporated in the 'All groups' index number from June 1969. The thirty-three items contained in the interim series constituted 74 per cent of the total value of Australian exports (merchandise and non-merchandise) in 1969-70.



## Index numbers

Index numbers for each of the groups and 'All groups' are shown in the following table. The yearly index numbers are simple averages of the twelve monthly index numbers in each year.

**EXPORT PRICE INDEX NUMBERS, YEARS 1967-68 TO 1971-72 AND MONTHS  
JULY TO DECEMBER 1972**

(Base of each index: year 1959-60 = 100)

Period	Wool	Meats	Dairy produce	Cereals	Dried and canned fruits	Sugar	Hides and tallow	Metals and coal (a)	Gold	All groups
1967-68.	95	125	79	109	95	67	67	120	104	100
1968-69.	99	131	72	104	97	72	73	123	117	102
1969-70(b)	87	148	73	96	99	93	94	143	109	(c)103
1970-71.	67	152	88	100	102	113	94	139	109	(c)101
1971-72.	72	147	135	99	103	127	96	138	126	(c)104
1972-73—	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)(c)
July .	(d)100	157	132	98	p104	140	114	141	(d)141	p114
August .	102	157	125	95	p101	142	125	140	(d)141	p113
September .	120	161	126	98	p100	135	132	139	184	p118
October .	167	162	126	106	p102	141	146	139	178	p131
November .	153	163	126	105	p100	136	150	137	168	p127
December .	166	168	118	105	p100	144	152	138	172	p131

(a) Comprises coal, iron and steel, copper, zinc, lead and silver. Does not include iron ore, bauxite, alumina and mineral sands, which, however, have been included in the 'All groups' index from July 1969. (b) Interim series linked as at June 1969. (c) Interim series includes, in addition to the specified groups the 4 items: iron ore, bauxite, alumina and mineral sands. (d) Nominal.

## Link between current and previous indexes

In order to show approximate movements in export prices over a long period, the 'All groups' indexes of the successive series have been linked together at the earliest year for which each of the indexes was compiled. The table below shows this linked series and a long-term price index for wool, which is the most important single component in the movement of the 'All groups' index.

**EXPORT PRICE INDEX NUMBERS—LINKED SERIES 1936-37 TO 1971-72**

(Base of each index: year 1959-60 = 100)

Period	Wool	All groups	Period	Wool	All groups
1936-37 . . . . .	29	30	1954-55 . . . . .	127	114
1937-38 . . . . .	23	27	1955-56 . . . . .	109	105
1938-39 . . . . .	19	22	1956-57 . . . . .	136	117
1939-40 . . . . .	23	26	1957-58 . . . . .	111	102
1940-41 . . . . .	24	28	1958-59 . . . . .	85	90
1941-42 . . . . .	24	28	1959-60 . . . . .	100	100
1942-43 . . . . .	28	30	1960-61 . . . . .	92	95
1943-44 . . . . .	28	31	1961-62 . . . . .	97	96
1944-45 . . . . .	28	34	1962-63 . . . . .	104	101
1945-46 . . . . .	28	39	1963-64 . . . . .	120	114
1946-47 . . . . .	41	54	1964-65 . . . . .	102	105
1947-48 . . . . .	68	75	1965-66 . . . . .	107	107
1948-49 . . . . .	86	88	1966-67 . . . . .	103	105
1949-50 . . . . .	111	101	1967-68 . . . . .	95	100
1950-51 . . . . .	235	173	1968-69 . . . . .	99	102
1951-52 . . . . .	133	125	1969-70(a) . . . . .	87	103
1952-53 . . . . .	145	128	1970-71 . . . . .	67	101
1953-54 . . . . .	145	125	1971-72 . . . . .	72	104

(a) Interim series linked as at June 1969.

## WAGES, EARNINGS AND HOURS

### Arbitration and Wages Boards Acts and associated legislation

Particulars regarding the operation of Commonwealth and State Laws for the regulation of wages, hours and other conditions of employment were first compiled for the year 1913, and revised particulars have appeared annually in the *Labour Report*. A summary of the Commonwealth legislation and brief particulars of Commonwealth and State industrial tribunals are given in the following paragraphs.

#### Commonwealth industrial legislation and tribunals

Under placitum (xxv) of Section 51 of the Commonwealth of Australia Constitution, the Commonwealth Parliament is empowered to make laws with respect to 'conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State'. The Parliament has made such a law, namely the *Conciliation and Arbitration Act 1904-1972*.

This Act defines an 'industrial dispute' as:

'(a) A dispute (including a threatened, impending or probable dispute) as to industrial matters which extends beyond the limits of any State; and (b) a situation which is likely to give rise to a dispute as to industrial matters which so extends; and includes—(c) such a dispute in relation to employment in an industry carried on by, or under the control of, a State or an authority of a State; (d) a dispute in relation to employment in an industry carried on by, or under the control of, the Commonwealth or an authority of the Commonwealth, whether or not the dispute extends beyond the limits of any one State; and (e) a claim which an organization is entitled to submit to the Commission under section eleven A of the *Public Service Arbitration Act 1920-1972* or an application or matter which the Public Service Arbitrator has refrained from hearing, or from further hearing, or from determining under section fourteen A of that Act, whether or not there exists in relation to the claim, application or matter a dispute as to industrial matters which extends beyond the limits of any one State.'

The Conciliation and Arbitration Act was extensively amended by an Act (No. 44 of 1956) assented to on 30 June 1956. This amendment altered the structure of the arbitration machinery by separating the judicial functions from the conciliation and arbitration functions. The Commonwealth Industrial Court was established to deal with judicial matters under the Act, and the Commonwealth Conciliation and Arbitration Commission to handle the functions of conciliation and arbitration. A summary of the provisions of the *Conciliation and Arbitration Act 1904-1972* is given in the following paragraphs.

The Commonwealth Industrial Court is at present composed of a Chief Judge and seven other Judges. The jurisdiction of the Court shall be exercised by not less than three Judges, except in the following circumstances. A single Judge may exercise the jurisdiction of the Court with respect to the dismissal or injury of an employee on account of industrial action, interpretation of awards, questions concerning eligibility of membership of an organisation, disputes between an organisation and its members (except disputes regarding the requirements and performance of the rules of an organisation), and a prescribed matter of practice or procedure. A single Judge may refer a question of law for the opinion of the Court constituted by not less than three Judges. The Court is a Superior Court of Record with the same power to punish contempts of its power and authority as is possessed by the High Court. In general, decisions of the Industrial Court are final; however, an appeal lies to the High Court, but only when the latter grants leave to appeal. The Act provides for the registration of associations of employees and employers, and for inquiries to be held concerning disputed elections in organisations; and certain powers in connection therewith are, by the Act, given to the Industrial Court. Provision is also made for the Commission to exercise the powers of the Court with regard to an application for cancellation of registration of an organisation. Any such change of jurisdiction must be notified by proclamation. This provision could be used if the powers of the Court in this regard were declared, in whole or in part, to be invalid.

Special provision is made concerning the right of audience before the Commonwealth Industrial Court. Briefly, except in proceedings which, in general, involve questions of law or offences against the Act, parties are able to elect whether to appear personally or to be represented by lawyers or officials. Even in proceedings involving questions of law, except appeals from decisions by other Courts to the Industrial Court, on matters arising under this Act or the *Public Service Arbitration Act 1920-1972*, the parties may, if they wish and the Court grants leave, be represented by officials.

The Commonwealth Conciliation and Arbitration Commission at the end of 1972 was composed of a President, six Deputy Presidents, a Senior Commissioner, fourteen Commissioners and three Conciliators. The Commission is empowered to prevent or settle industrial disputes by conciliation

or arbitration, and to make suggestions and to do such things as appear right and proper for (a) effecting a reconciliation between parties to industrial disputes; (b) preventing and settling industrial disputes by amicable agreement; and (c) preventing and settling, by conciliation or arbitration, industrial disputes not prevented or settled by amicable agreement. The Commission may exercise its powers of its own motion or on the application of a party.

The *Conciliation and Arbitration Act 1972* provided for the separation of the Commission's functions of conciliation and arbitration and for the appointment of Conciliation Commissioners and Arbitration Commissioners. The role of Presidential Members has been expanded beyond the hearing of reserved matters, appeals and references, to include involvement in settling individual disputes. The Act provided for the establishment of panels or 'task forces' within the Commission. Under this system the President assigns an industry or a group of industries to a panel of the Commission consisting of a Presidential Member, at least one Arbitration Commissioner and at least one Conciliation Commissioner. As far as practicable, the functions of the Commission in relation to that industry or group of industries are exercised by members of that panel.

When an industrial dispute occurs or is likely to occur, the Act provides that the Conciliation Commissioner shall take steps for the prompt prevention or settlement of that dispute. If agreement is reached, the parties may make a memorandum of their agreement and request the Conciliation Commissioner to certify that memorandum as an award, or they may request him to make an award or order giving effect to that agreement. The Conciliation Commissioner must satisfy himself that the agreement reached by the parties is in the public interest.

If the parties do not reach agreement the Conciliation Commissioner reports to the Presidential Member responsible for the panel. An Arbitration Commissioner or the Presidential Member then proceeds by arbitration to deal with the dispute or matters still in dispute. If the parties decide to resolve their differences at this stage, an award can be made by the Commission as if it were made pursuant to the conciliation process (*see above*).

Only a Full Bench of the Commission constituted by at least three Presidential Members nominated by the President has the power to make awards, or to certify agreements, concerning standard hours, national wage cases, the minimum wage, equal pay principles, annual leave and long-service leave. When the Full Bench is constituted to deal with appeals and references and the reserved matters listed above, it must consider the public interest in its decisions, having regard in particular to the state of the national economy and the likely effects on that economy of any award it might make.

An industrial dispute being heard by a Conciliation or Arbitration Commissioner or a Presidential Member may be referred to the Commission on the ground of public interest. If a party to a dispute makes an application for such a reference, the Commissioner or Presidential Member shall consult with the President, who may direct that the Full Bench constituted by at least three members nominated by the President, each of whom is either a Presidential Member or an Arbitration Commissioner, and at least two of whom are Presidential Members, shall hear and determine the dispute, or that part referred to it. In this hearing the Commission may have regard to evidence given and arguments adduced in arbitration proceedings prior to the hearing, and it may refer a part of the dispute to a Presidential Member or an Arbitration Commissioner for determination.

An appeal against the decision of an Arbitration Commissioner or a Presidential Member shall be heard by at least three members nominated by the President, each of whom is either a Presidential Member or an Arbitration Commissioner, and at least two of whom are Presidential Members. The President, after taking account of the views of the parties to a dispute, may appoint a member of the Commission to take evidence on behalf of the Full Bench, so that it can have this evidence before it when it commences its hearing.

Full benches of the Commission not constituted by the same persons may sit in joint session at the direction of the President when he considers it desirable and has the opinion that a question is common to the matters before those benches. A joint session may be held whether the benches concerned are constituted pursuant to the Conciliation and Arbitration Act or the Public Service Arbitration Act, and whether they are constituted to hear references or appeals. However, it is left to each appropriate full bench to determine any of the matters before it.

Provision is also made in the Act for a presidential member of the Commission to handle industrial matters in connection with the maritime industries, the Snowy Mountains Area and the stevedoring industry, except in those matters for which the Act requires that the Commission shall be constituted by more than one member. The Commonwealth Conciliation and Arbitration Commission also deals with disputes and industrial matters, interstate or intra-state, associated with undertakings or projects of the Commonwealth Government which have been declared by the Minister to be Commonwealth projects for the purposes of this Act. In effect, this places employees of Commonwealth projects, so declared, under the jurisdiction of the Commission. The Minister has the power to exempt certain persons or classes of persons working on these projects from the jurisdiction of the Commission.



The Commission may make an award in relation to an industrial dispute concerning employees of a Commonwealth project or when the Public Service Arbitrator refrains from dealing with claims made by a Public Service employee organisation or consents to the claims being presented to the Commission, though such an award may be inconsistent with a law of the Commonwealth relating to salaries, wages, rates of pay or terms or conditions of service of employees in the Public Service as defined by section three of the *Public Service Arbitration Act* 1920-1972, not being the *Compensation (Commonwealth Employees) Act* 1971-1972, the *Commonwealth Employees' Furlough Act* 1943-1968, the *Superannuation Act* 1922-1969 or any other prescribed Act.

An amendment of the Conciliation and Arbitration Act operative from November 1967 provided for the appointment of a person to be the Flight Crew Officers Industrial Tribunal empowered to prevent or settle industrial disputes relating to pilots, navigators, or flight engineers of aircraft.

The Conciliation and Arbitration Act provides that where a State law, or an order, award, decision or determination of a State industrial authority is inconsistent with or deals with a matter dealt within an award of the Commission, the latter shall prevail, and the former, to the extent of the inconsistency or in relation to the matter dealt with, shall be invalid.

Amendments to the Seat of Government (Administration) Act and the Northern Territory (Administration) Act, assented to on 2 June 1972, extended the Commission's jurisdiction in the Australian Capital Territory and the Northern Territory to disputes involving persons in employment whether or not they are in an industry in the constitutional sense of that word.

For further particulars regarding Commonwealth arbitration legislation, see the annual *Labour Report*. For information concerning the Australian Stevedoring Industry Authority see the chapter Transport and Communication of this Year Book, and for information on the Coal Industry Tribunal and the Commonwealth Public Service Arbitrator see the *Labour Report*.

### State industrial tribunals

#### New South Wales

The controlling authority is the Industrial Commission of New South Wales, consisting of a President and eight other Judges. Subsidiary tribunals are the Conciliation Commissioners and Conciliation Committees constituted for particular industries. Each Conciliation Committee consists of a Conciliation Commissioner as Chairman and equal numbers of representatives of employers and employees. Special Commissioners with conciliatory powers and limited arbitration powers also may be appointed. The Apprentices Act, 1969 conferred specific powers on the Industrial Commission in relation to certain apprenticeship matters. Compulsory control commenced in 1901, after the earlier Acts of 1892 and 1899 providing for voluntary submission of matters in dispute had proved abortive.

#### Victoria

The authorities are separate Wages Boards for the occupations and industries covered, each consisting of a chairman and equal numbers of representatives of employers and employees, and a Court of Industrial Appeals, the latter presided over by a Judge of the County Court. The system was instituted in the State in 1896, and represented the first example in Australia of legal regulation of wage rates.

#### Queensland

Legal control was first instituted in 1908 with the passing of the Wages Boards Act. 'The Industrial Conciliation and Arbitration Act of 1961' established the Industrial Conciliation and Arbitration Commission and preserved and continued in existence the Industrial Court. The Industrial Court is constituted by the President (a Judge of the Supreme Court of Queensland) sitting alone, and the Full Industrial Court by the President and two Commissioners. The Conciliation and Arbitration Commission is constituted by a Commissioner sitting alone; and the Full Bench of the Commission by at least three Commissioners. Not more than five Commissioners shall be appointed. A Commissioner shall not be capable of being a member of the Executive Council or of the Legislative Assembly, and shall not take part in the management of any business.

#### South Australia

In South Australia from July 1966 the system of control consists of an Industrial Commission, an Industrial Court, and Conciliation Committees. The Industrial Commission is composed of a President, two Deputy Presidents, and four Commissioners and has power to make awards. The President of the Commission is also Judge of the Industrial Court which deals with legal matters and workmen's compensation. The four Commissioners are chairmen of each of the Conciliation

Committees consisting of an equal number of representatives of employers and employees. These committees issue awards. Where complete agreement cannot be reached in these committees the chairman sits as a Commissioner to determine the unresolved matters. Provision is made for references and appeals to the Full Commission.

### Western Australia

Legal control dates back to 1900. The present system of control comprises a five-man Western Australian Industrial Commission and an Industrial Appeal Court consisting of three Supreme Court Judges who are nominated by the Chief Justice of Western Australia. A Commissioner may, in relation to any dispute or other matter, refer such matters to the Commission in Court Session. Similarly, appeals from decisions of a single Commissioner are heard by three other Commissioners acting as the Commission in Court Session, but such hearings are restricted to the evidence and matters raised in the proceedings before the single Commissioner. Up to December 1966 the Commission in Court Session fixed and adjusted the basic wage. In December 1966 legislation provided that the Western Australian basic wage rates should be the same as the Commonwealth Six Capitals rates as soon as these exceeded the State rates. However, Commonwealth basic wages were eliminated from Commonwealth awards in July 1967. Western Australian legislation operative from 22 November 1968 fixed the State basic wages for adult males and adult females and provided for the Commission to review the basic wage at least every twelve months (for further details see page 269). Appeals from the Commission to the Industrial Appeal Court are limited to matters which are erroneous in law or in excess of jurisdiction. The Court has the power to impose penalties for disobedience of orders made by the Commission.

The Western Australian Coal Industry Tribunal, established under the *Mining Act*, 1904–1971, has power to determine any industrial matter in the coal mining industry. It consists of a chairman and four other members (two representatives each of employers and employees). Boards of reference may be appointed by the Tribunal, and decisions of the Tribunal may be reviewed by the Western Australian Industrial Commission on the application of a party subject to the decision.

### Tasmania

The Authority consists of Wages Boards for separate industries, comprising a Chairman (who is common to all Wages Boards) appointed by the Governor, and equal numbers of representatives of employers and employees appointed by the Minister administering the Act. The system was instituted in 1910.

## Incidence of industrial awards, determinations and collective agreements

In May 1968 a survey ascertained the approximate proportions of employees whose wages, salaries and conditions of work were normally varied in accordance with variations in awards, determinations and registered collective agreements of Commonwealth and State industrial authorities. The scope, results, etc. of this survey are published in a statistical bulletin *Survey of the Incidence of Industrial Awards, Determinations and Collective Agreements*, May 1968 (6.5) and in statistical bulletin *Survey of the Incidence of Industrial Awards, Determinations and Collective Agreements*, May 1968 (Bulletin No. 2) (6.25).

## Rates of wage and hours of work

This section contains indexes (with base: year 1954 = 100) of minimum weekly and hourly rates of wage and standard hours of work for adult males and adult females for Australia and each State. In the indexes there are fifteen industry groups for adult males and eight industry groups for adult females. For relevant periods these indexes replace cognate indexes (base: year 1911 = 1,000 for males and April 1914 = 1,000 for females) published in Year Books before No. 46, 1960. The current indexes are based on the occupation structure existing in 1954. Weights for each industry and each occupation were derived from two sample surveys made in that year. The first was the Survey of Awards in April 1954 which showed the number of employees covered by individual awards, determinations and collective agreements. This provided employee weights for each industry as well as a basis for the Survey of Award Occupations made in November 1954. This second survey showed the number of employees in each occupation within selected awards, etc. thereby providing occupation weights.

The industrial classification used in the current indexes, shown in the table on page 251, does not differ basically from the previous classification, the alterations being largely in the arrangement of classes. The former Pastoral, agricultural, etc. group and the domestic part of the Amusement, hotels, personal service, etc. group are excluded from the current indexes because of coverage difficulties.

The minimum wage rates and standard hours of work used in the current indexes are for representative occupations within each industry. They have been derived entirely from representative awards, determinations and collective agreements in force at the end of each month or quarter, commencing with March 1939 for adult males and March 1951 for adult females. Particulars have been available as at the end of each month for adult males from January 1957 and for adult females from July 1967. The index for adult males includes rates and hours for 3,415 award designations. However, as some of these designations are operative within more than one industry, or in more than one State, the total number of individual award occupations is 2,313. For adult females the corresponding numbers are 1,100 and 515. Using the industry and occupation weights derived from the surveys described above, these rates and hours were combined to give weighted averages for each industry group for each State and Australia.

Because the indexes are designed to measure movements in prescribed minimum rates of 'wages' as distinct from 'salaries', those awards, etc. which relate solely or mainly to salary earners are excluded.

A more detailed description of the current indexes of minimum rates of wage and standard hours of work is given in the *Labour Report*, which also contains an extensive tabular presentation of the minimum rates of pay for adult males and females in the principal occupations in the capital city of each State. Further particulars of wage rates and index numbers will be found in mimeographed bulletins *Minimum Wage Rates*, March 1939 to June 1965 and *Wage Rates Indexes*, June 1965 to June 1968. Current figures are published in the monthly bulletin *Wage Rates and Earnings*.

#### Weekly wage rates—adult males

The following table shows, for each State and Australia, the weighted average minimum weekly rates of wage payable to adult male workers for a full week's work and index numbers at the dates specified.

#### WEEKLY WAGE RATES: ADULT MALES, ALL GROUPS(a), STATES, DECEMBER 1950 TO 1972 WEIGHTED AVERAGE MINIMUM WEEKLY RATES(b) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

End of December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(c) (\$)							
1950 . . .	20.62	20.18	19.52	19.79	20.06	19.80	20.20
1960 . . .	36.28	34.99	35.07	34.22	35.81	35.15	35.50
1970 . . .	54.40	53.68	55.07	52.12	55.99	54.49	54.20
1971 . . .	61.50	61.35	62.94	59.42	61.97	60.82	61.48
1972p. . .	67.06	67.30	68.12	65.26	65.60	65.81	66.96

#### INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

1950 . . .	73.0	71.4	69.1	70.1	71.0	70.1	71.5
1960 . . .	128.5	123.9	124.2	121.2	126.8	124.5	125.7
1970 . . .	192.6	190.1	195.0	184.6	198.2	192.9	191.9
1971 . . .	217.8	217.2	222.9	210.4	219.4	215.3	217.7
1972p. . .	237.4	238.3	241.2	231.1	232.3	233.0	237.1

(a) Excludes rural industry. (b) As prescribed in awards, determinations and collective agreements. (c) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.



The following table shows for Australia the weighted average minimum weekly rates of wage and index numbers in each industry group and for all groups (excluding rural industry) at the dates specified.

**WEEKLY WAGE RATES: ADULT MALES, INDUSTRY GROUPS, AUSTRALIA  
DECEMBER 1950 TO 1972**

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(a) PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

Industry Group	End of December—				
	1950	1960	1970	1971	1972p
RATES OF WAGE(b) (\$)					
Mining and quarrying(c) . . . . .	25.96	41.47	60.83	68.98	73.20
Manufacturing—					
Engineering, metals, vehicles, etc. . . . .	20.17	35.02	51.88	59.60	64.46
Textiles, clothing and footwear . . . . .	19.74	34.04	50.92	57.31	62.90
Food, drink and tobacco . . . . .	20.14	35.22	52.98	58.80	64.51
Sawmilling, furniture, etc. . . . .	19.60	34.62	51.84	58.30	62.03
Paper, printing, etc. . . . .	21.42	37.92	57.47	65.35	70.91
Other manufacturing . . . . .	19.76	34.72	52.34	59.96	65.56
All manufacturing groups . . . . .	20.08	35.05	52.36	59.61	64.73
Building and construction . . . . .	19.86	35.75	56.67	63.71	69.50
Railway services . . . . .	19.58	34.65	51.32	58.34	64.03
Road and air transport . . . . .	19.79	35.25	54.65	61.48	66.83
Shipping and stevedoring(d) . . . . .	19.66	34.46	60.54	64.69	72.41
Communication . . . . .	21.33	38.49	68.95	77.29	86.72
Wholesale and retail trade . . . . .	20.08	35.71	53.82	61.54	67.19
Public authority (n.e.i.) and community and business services . . . . .	19.21	34.81	54.11	62.52	67.80
Amusement, hotels, personal service, etc. . . . .	19.23	33.73	49.16	56.73	60.59
All industry groups(e) . . . . .	20.20	35.50	54.20	61.48	66.96

**INDEX NUMBERS**

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

Mining and quarrying(c) . . . . .	91.9	146.8	215.4	244.2	259.2
Manufacturing—					
Engineering, metals, vehicles, etc. . . . .	71.4	124.0	183.7	211.0	228.2
Textiles, clothing and footwear . . . . .	69.9	120.5	180.3	202.9	222.7
Food, drink and tobacco . . . . .	71.3	124.7	187.6	208.2	228.4
Sawmilling, furniture, etc. . . . .	69.4	122.6	183.6	206.4	219.6
Paper, printing, etc. . . . .	75.9	134.3	203.5	231.4	251.1
Other manufacturing . . . . .	70.0	122.9	185.3	212.3	232.1
All manufacturing groups . . . . .	71.1	124.1	185.4	211.1	229.2
Building and construction . . . . .	70.3	126.6	200.7	225.6	246.1
Railway services . . . . .	69.3	122.7	181.7	206.6	226.7
Road and air transport . . . . .	70.1	124.8	193.5	217.7	236.6
Shipping and stevedoring(d) . . . . .	69.6	122.0	214.3	229.0	256.4
Communication . . . . .	75.5	136.3	244.1	273.7	307.0
Wholesale and retail trade . . . . .	71.1	126.4	190.6	217.9	237.9
Public authority (n.e.i.) and community and business services . . . . .	68.0	123.2	191.6	221.4	240.1
Amusement, hotels, personal service, etc. . . . .	68.1	119.4	174.1	200.9	214.5
All industry groups(e) . . . . .	71.5	125.7	191.9	217.7	237.0

(a) As prescribed in awards, determinations and collective agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. (c) For mining, rates of wage used are those prescribed for the principal mining centres and include lead bonuses, etc. (d) Includes rates of wage (and value of keep) for occupations in the coastal shipping service, other than masters, officers and engineers. (e) Excludes rural industry.

*Adult males—jurisdiction.* Weighted average minimum weekly wage rates for adult males covered by *Commonwealth awards, etc.* and for those covered by *State awards, etc.* (as defined below) are shown separately in the following table. For the purposes of the index, *Commonwealth awards, etc.* include awards of, or collective agreements registered with, the Commonwealth Conciliation and Arbitration Commission, and determinations of the Commonwealth Public Service Arbitrator. *State awards, etc.* include awards or determinations of, or collective agreements registered with, State industrial tribunals, together with certain unregistered collective agreements when these are dominant in the particular industries to which they refer.

WEEKLY WAGE RATES: ADULT MALES, ALL GROUPS(a), DECEMBER 1950 TO 1972  
(\$)

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(b) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AS PRESCRIBED IN AWARDS, DETERMINATIONS AND COLLECTIVE AGREEMENTS

Jurisdiction	End of December—				
	1950	1960	1970	1971	1972p
Commonwealth awards, etc. . . . .	20.18	35.14	53.77	61.35	67.07
State awards, etc. . . . .	20.23	35.88	54.65	61.62	66.85
All awards, etc. . . . .	20.20	35.50	54.20	61.48	66.96

(a) Excludes rural industry. (b) The amounts should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. For definitions see text above.

Weekly wage rates—adult females

The following table shows, for each State and Australia, the weighted average minimum weekly rates of wage payable to adult female workers for a full week's work and index numbers at the dates specified. This series has not been compiled for years prior to 1951.

WEEKLY WAGE RATES: ADULT FEMALES, ALL GROUPS(a), STATES, DECEMBER 1951 TO 1972

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(b) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

End of December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(c) (\$)							
1951 . . . . .	17.23	17.22	16.12	17.02	16.25	16.56	17.03
1960 . . . . .	26.12	24.66	23.93	24.29	25.12	23.88	25.17
1970 . . . . .	40.68	38.65	40.60	37.51	40.02	38.17	39.68
1971 . . . . .	49.06	45.65	46.53	44.12	44.97	44.35	46.99
1972p. . . . .	52.84	51.02	52.19	50.46	51.48	48.94	51.84

INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

1951 . . . . .	86.6	86.5	81.0	85.5	81.6	83.2	85.6
1960 . . . . .	131.2	123.9	120.2	122.0	126.2	120.0	126.4
1970 . . . . .	204.3	194.2	203.9	188.4	201.0	191.7	199.3
1971 . . . . .	246.4	229.3	233.7	221.6	225.9	222.8	236.0
1972p. . . . .	265.4	256.3	262.2	253.5	258.6	245.9	260.4

(a) Excludes rural industry; mining and quarrying; and building and construction. (b) As prescribed in awards, determinations and collective agreements. (c) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

The following table shows for Australia weighted average minimum weekly rates of wage and index numbers in each of the industry groups in which the number of females employed is important, and the weighted average for all groups combined, at the dates specified.

**WEEKLY WAGE RATES: ADULT FEMALES, INDUSTRY GROUPS, AUSTRALIA  
DECEMBER 1951 TO 1972**

WEIGHTED AVERAGE MINIMUM WEEKLY RATES<sup>(a)</sup> PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

Industry Group	End of December—				
	1951	1960	1970	1971	1972 <sup>p</sup>
<b>RATES OF WAGE<sup>(b)</sup> (\$)</b>					
Manufacturing—					
Engineering, metals, vehicles, etc. . . .	17.09	24.98	40.24	48.82	55.04
Textiles, clothing and footwear . . . .	17.12	24.07	36.59	43.20	46.67
Food, drink and tobacco . . . . .	16.58	24.63	38.22	43.45	48.38
Other manufacturing . . . . .	16.88	24.80	37.79	44.79	50.44
<i>All manufacturing groups</i> . . . .	<i>16.99</i>	<i>24.46</i>	<i>37.72</i>	<i>44.58</i>	<i>49.20</i>
Transport and communication . . . .	17.75	26.02	44.19	51.97	57.99
Wholesale and retail trade . . . . .	17.11	26.36	42.12	49.68	54.65
Public authority (n.e.i.) and community and business services . . . . .	17.01	25.78	41.92	49.65	55.49
Amusement, hotels, personal service, etc. .	16.68	24.50	37.97	46.03	50.03
<i>All industry groups<sup>(c)</sup></i> . . . . .	<i>17.03</i>	<i>25.17</i>	<i>39.68</i>	<i>46.99</i>	<i>51.84</i>

**INDEX NUMBERS**

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

Manufacturing—					
Engineering, metals, vehicles, etc. . . .	85.9	125.5	202.1	245.2	276.5
Textiles, clothing and footwear . . . .	86.0	120.9	183.8	217.0	234.4
Food, drink and tobacco . . . . .	83.3	123.7	192.0	218.2	243.0
Other manufacturing . . . . .	84.8	124.6	189.8	225.0	253.4
<i>All manufacturing groups</i> . . . .	<i>85.4</i>	<i>122.9</i>	<i>189.5</i>	<i>223.9</i>	<i>247.1</i>
Transport and communication . . . .	89.2	130.7	222.0	261.0	291.3
Wholesale and retail trade . . . . .	85.9	132.4	211.6	249.5	274.5
Public authority (n.e.i.) and community and business services . . . . .	85.4	129.5	210.6	249.4	278.7
Amusement, hotels, personal service, etc. .	83.8	123.1	190.7	231.2	251.3
<i>All industry groups<sup>(c)</sup></i> . . . . .	<i>85.6</i>	<i>126.4</i>	<i>199.3</i>	<i>236.0</i>	<i>260.4</i>

(a) As prescribed in awards, determinations and collective agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. (c) Excludes rural industry; mining and quarrying; and building and construction.

**Standard hours of work**

In the fixation of weekly wage rates most industrial tribunals prescribe the number of hours constituting a full week's work (excluding overtime) for the wage rates specified. The hours of work so prescribed form the basis of the compilation of the weighted averages and index numbers on page 254. The main features of the reduction of hours to forty-four and later to forty per week are summarised in previous issues of the Year Book. Since January 1948 practically all employees in Australia have had a standard working week of forty hours or less.

**Hourly wage rates**

The average rates of wage in the preceding tables are based on the minimum rates prescribed for selected occupations in awards, etc. for a full week's work, excluding overtime. However, the number of hours constituting a full week's work differs in some instances between various occupations in each State, and between the same occupations in the several States. For some purposes a better comparison may be obtained by reducing the results in the preceding paragraphs to a common basis, namely the rate of wage per hour. The particulars of weighted average minimum hourly rates of wage given in the following tables relate to all industry groups except rural industry, and shipping and



stevedoring. The rural industry is not included in the index, and shipping and stevedoring has been excluded because, for some of the occupations in this group, definite particulars for the computation of average working hours and hourly rates of wage are not available.

The following table shows the weighted average minimum hourly rates of wage payable to adult male workers and index numbers of hourly rates in each State.

**HOURLY WAGE RATES: ADULT MALES, ALL GROUPS(a)**  
**STATES, DECEMBER 1950 TO 1972**

WEIGHTED AVERAGE MINIMUM HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES

<i>End of December—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>RATES OF WAGE(b)</b> (cents)							
1950 . . .	51.63	50.48	48.83	49.53	50.29	49.52	50.58
1960 . . .	90.91	87.57	87.79	85.61	89.89	88.08	88.92
1970 . . .	136.08	133.91	137.49	129.74	140.09	135.50	135.35
1971 . . .	154.43	153.31	157.66	148.25	155.23	151.81	153.97
1972p. . .	168.25	168.09	170.41	162.71	164.03	163.95	167.49

**INDEX NUMBERS**

(Base: Weighted Average Hourly Wage Rate for Australia, 1954 = 100)

1950 . . .	73.0	71.4	69.0	70.0	71.7	70.0	71.5
1960 . . .	128.5	123.8	124.1	121.0	127.1	124.5	125.7
1970 . . .	192.3	189.3	194.3	183.4	198.0	191.5	191.3
1971 . . .	218.3	216.7	222.8	209.5	219.4	214.6	217.6
1972p. . .	237.8	237.6	240.9	230.0	231.9	231.7	236.7

(a) Excludes rural industry, and shipping and stevedoring. See page 253. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

The following table shows the weighted average minimum hourly rates of wage payable to adult female workers and index numbers of hourly rates in each State.

**HOURLY WAGE RATES: ADULT FEMALES, ALL GROUPS(a)**  
**STATES, DECEMBER 1951 TO 1972**

WEIGHTED AVERAGE MINIMUM HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES

<i>End of December—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>RATES OF WAGE(b)</b> (cents)							
1951 . . .	43.58	43.25	40.60	42.81	40.85	41.86	42.92
1960 . . .	66.09	61.94	60.28	61.08	63.14	60.37	63.44
1970 . . .	102.92	97.10	102.26	94.32	100.59	96.32	100.03
1971 . . .	124.13	114.67	117.21	110.96	113.04	111.91	118.45
1972p. . .	133.68	128.16	131.47	126.89	129.40	123.52	130.67

**INDEX NUMBERS**

(Base: Weighted Average Hourly Wage Rate for Australia, 1954 = 100)

1951 . . .	86.9	86.2	80.9	85.3	81.4	83.4	85.6
1960 . . .	131.7	123.5	120.1	121.7	125.8	120.3	126.4
1970 . . .	205.1	193.5	203.8	188.0	200.5	192.0	199.4
1971 . . .	247.4	228.6	233.6	221.2	225.3	223.1	236.1
1972p. . .	266.4	255.5	262.0	252.9	257.9	246.2	260.5

(a) Excludes rural industry; mining and quarrying; and building and construction. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

**Weighted average standard weekly hours of work**

The 40-hour week has operated in Australia generally from 1 January 1948. However, as stated on page 248, the number of hours constituting a full week's work (excluding overtime) differs between occupations and/or between States. The weighted average standard hours of work (excluding overtime) prescribed in awards, determinations and collective agreements for a full working week, in respect of adult male workers in all industry groups except rural industry, and shipping and stevedoring, at 31 December 1972, were: New South Wales, 39.78; Victoria, 39.97; Queensland, 39.89; South Australia, 39.96; Western Australia, 39.85; Tasmania, 39.93; Australia, 39.87. Corresponding figures for adult female workers at 31 December 1972 were: New South Wales, 39.53; Victoria, 39.81; Queensland, 39.70; South Australia, 39.77; Western Australia, 39.78; Tasmania, 39.63; Australia, 39.67.

**Average Weekly Earnings**

The figures in this section are derived from particulars of employment and wages and salaries recorded on payroll tax returns, from other direct collections and from estimates of the unrecorded balance. The figures relate to civilians only. In addition to salary and wage payments at award rates, the total earnings figures used in the calculation of average weekly earnings include the earnings of employees not covered by awards, overtime earnings, over-award and bonus payments, payments made in advance or retrospectively during the period, etc.

Particulars of wages and salaries paid are not available for males and females separately from the sources used for this series; average weekly earnings have therefore been calculated in terms of *male units*, i.e. total male employees plus a proportion of female employees, the proportion being derived from the estimated ratios of female to male average earnings. Different ratios of female to male average earnings, based on information from the annual surveys of weekly earnings and hours, from a sample survey carried out in November 1969 and from other sources, are used for individual States. Ratios used for the June 1973 quarter are as follows: New South Wales (including the Australian Capital Territory) 58 per cent, Victoria 57, Queensland 54, South Australia (including the Northern Territory) 53, Western Australia 51 and Tasmania 54. As the number of male units used in calculating Australian average weekly earnings is the sum of the estimates for the States, a separate ratio for Australia is not used, but the weighted average of the State ratios is approximately 56.0 per cent. Further changes in these ratios are expected to become necessary from time to time to reflect, for example, the extension of equal pay provisions, or appreciable and sustained changes in the levels of male overtime earnings. However, small differences in these ratios have relatively little effect on the earnings figures; a one per cent rise in the ratio reduces average weekly earnings of \$100 by about 35 cents.

Annual averages for each State and Australia for the years 1966-67 to 1972-73 are shown in the table below.

NOTE. At the 1971 population census all trainee teachers were for the first time classified as not in the labour force. Previously those enrolled at government teachers colleges (and in some cases at other institutions also) had been included. Trainees affected by the reclassification have now been excluded, together with their allowances, from the calculation of average weekly earnings from September quarter 1971. The effect of their exclusion has been to increase average earnings figures in all States by approximately 30 cents.

**AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT(a), 1966-67 TO 1972-73**  
(£)

<i>Period</i>	<i>N.S.W.(b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(c)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1966-67 . .	63.50	63.90	57.10	57.60	59.20	58.40	61.70
1967-68 . .	67.00	67.60	60.20	61.10	63.90	61.90	65.30
1968-69 . .	72.70	72.10	64.30	65.20	68.80	65.60	70.20
1969-70 . .	78.80	78.10	69.20	70.90	75.50	70.70	76.10
1970-71 . .	87.70	86.10	77.70	78.20	84.80	78.40	84.50
1971-72 . .	96.50	93.60	86.90	86.70	93.60	86.90	93.00
1972-73 . .	105.10	102.60	96.90	94.30	99.00	94.50	101.50

(a) See explanatory notes above.

(b) Includes the Australian Capital Territory.

(c) Includes the Northern Territory.

Because of the adoption of a new definition of the labour force at the June 1966 population census, there is a break in comparability between June and September quarters of 1966 in the employment series used in the calculation of average weekly earnings. For this and other reasons (in particular, the

lack of precise information about the ratios of female to male earnings in the several States for 1965-66 and earlier years), it is not possible to make a comparable series of State estimates for periods prior to September quarter 1966. However, in order to provide a broad indication of trends over a longer period, estimates for Australia as a whole have been calculated for the period back to September quarter 1961 by methods and on a basis that are as nearly as possible comparable with those used for the current series. Annual averages for this period are: 1961-62, \$47.60; 1962-63, \$48.90; 1963-64, \$51.50; 1964-65, \$55.30; 1965-66, \$57.90.

For current statistics in this series reference should be made to the quarterly publication *Average Weekly Earnings* (6.18).

### Surveys of wage rates, earnings and hours, 1960 to 1972

Since 1960 a number of statistical surveys of wages and hours of work in Australia have been undertaken by this Bureau. The object of these surveys has been to obtain information on wage rates, actual weekly earnings and hours of work on a more comprehensive scale than previously available in Australia. A summary of the scope and coverage of each of these surveys is shown on the following pages.

#### Survey of wage rates and earnings, September 1960

For information on the results of this survey see Year Book No. 51, pages 439-42.

#### Survey of weekly earnings, October 1961

The results of this survey were published in Year Book No. 51, pages 442-4.

#### Surveys of weekly earnings and hours, October 1962 to 1972 (excluding October 1965)

For details of these surveys see pages 259-65.

#### Survey of weekly earnings, October 1965

A survey of weekly earnings of male employees was conducted for the last pay-period in October 1965. The survey was conducted by means of: (i) a sample of private employers subject to pay-roll tax (that is those paying more than \$400 a week in wages and salaries); (ii) a complete coverage of Commonwealth and State government departments and semi-government authorities; and (iii) a sample of local government authorities. It related to certain specified industry groups only.

The object of the survey was to obtain estimates of the numbers and proportions of full-time adult male employees in various weekly earnings groups and a dissection of total weekly earnings paid to full-time adult males into: (i) overtime earnings; (ii) ordinary time earnings at 'award, etc. rates'; and (iii) ordinary time earnings in excess of those at 'award, etc. rates' (divided into (a) payment by measured result and (b) other) as defined. The survey also provided figures of average weekly earnings for full-time adult male and junior male employees. Separate details were obtained for (i) managerial, executive, professional and higher supervisory staff, and (ii) other full-time male employees. Results of this survey were published in detail in *Labour Report* No. 52, 1965 and 1966.

### Survey of weekly earnings (size distribution), May 1971

#### General

A survey of weekly earnings of adult male employees was conducted for the pay-period which included 12 May 1971. Some results of this survey are given in the following pages. Detailed results were published in the bulletin, *Survey of Weekly Earnings (Size Distribution)*, May 1971 (6.30) and in the *Labour Report*, No. 56, 1971 (pages 117-70).

The object of the survey was to obtain estimates of the numbers and proportions of full-time adult male employees (paid for a full week) in various total weekly earnings groups, average weekly total earnings for these employees, and a dissection of average weekly total earnings into average weekly overtime earnings and average weekly ordinary time earnings. Separate details were obtained for (a) male managerial, executive, professional and higher supervisory staff, and (b) other full-time adult male employees. Similar statistics were last obtained from a survey of weekly earnings in October 1965 (see above) but that survey did not have as wide an industry scope as this current survey. The 1971 survey excluded employees of private employers not subject to pay-roll tax; employees in rural industry and private domestic service; employees of religious, benevolent and other similar organisations exempt from pay-roll tax (other than public hospitals and government institutions); and waterside workers employed on a casual basis.



Because this survey was confined to full-time adult male employees *paid for a full working week*, and for other reasons, the average weekly earnings for private employees shown in the following tables are not directly comparable with the average earnings for full-time adult males obtained from the annual October surveys of weekly earnings and hours (*see* pages 259-65).

### Scope of survey

The survey was conducted by means of stratified random samples of (i) private employers subject to pay-roll tax (that is those, other than exempt employers, paying more than \$400 a week in wages and salaries), (ii) public hospitals, and (iii) local government authorities; and in addition a complete coverage of (iv) Commonwealth and State government departments, government authorities and semi-government bodies. In the published results 'private employees' refer to those covered by categories (i) and (ii) and 'government employees' refer to those covered by categories (iii) and (iv). There were 4,995 private employers surveyed. The survey results are representative of 2,212,600 full-time adult male employees made up of 1,500,600 full-time adult males in private employment and 712,000 in government employment.

The estimates of private and government employees do not correspond to the estimates of total male civilian employment in the specified industry groups published by this Bureau. This is mainly because the sample of private employers was restricted to those subject to pay-roll tax and these employers were generally classified to the industry group of their major activity, and because the information obtained in the survey related to full-time adult male employees (as defined).

As the private sector of the survey and the local government collections were based on samples, the resultant estimates are subject to sampling variability, that is, variations which might occur by chance because only a sample of employers was surveyed. The extent of the detail published has been determined after considering estimated measures of sampling variability. For further information on sampling variability see the bulletin *Survey of Weekly Earnings (Size Distribution)*, May 1971 (6.30) mentioned above.

### Definitions

The following definitions refer to terms used in the survey and in the following tables.

*Adult males* include all male employees 21 years of age and over and those male employees who, although under 21 years of age, are paid at the adult male rate for their occupation. All other male employees under 21 years of age are excluded.

*Number of adult male employees* refers to all adult male employees (as defined above) who received pay for the pay-period which included 12 May 1971.

*Full-time adult male employees* are those adult male employees whose normal hours of work are 30 or more a week and who were paid for their full normal hours of work for the pay-period which included 12 May 1971. Included are full-time adult male employees on paid annual leave, paid sick leave, long service leave and paid holidays taken during the specified pay-period if they received pay for their full normal hours of work. Excluded are 'full-time' adult male employees on short-time; 'full-time' adult male employees who began or ceased work during the pay-period; and all adult male employees absent without pay (for any reason) during the pay-period.

Full-time adult males were classified according to whether they were *managerial, executive, professional and higher supervisory staff* (who were not further defined) or *all other full-time adult male employees* (i.e. other than managerial, etc. staff). The non-managerial employees include full-time adult male minor supervisory employees, leading hands, clerical and office staff as well as ordinary wages employees.

*Private employees* are employees of private employers subject to pay-roll tax and of all public hospitals. *Government employees* are employees of Commonwealth and State government departments, government authorities and semi-government bodies, and of local government authorities.

*Total gross weekly earnings* refers to gross earnings of adult male employees before taxation and other deductions have been made, for the pay-period which included 12 May 1971. Included are over-time earnings, ordinary time earnings, shift allowances, penalty rates, commission and similar payments; and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the specified pay-period. Included are one week's proportion of payments made other than on a weekly basis, e.g. salary paid fortnightly or monthly; paid annual and other leave taken during the specified pay-period; periodical payments under incentive, piecework, profit sharing schemes, etc.; commissions; annual or periodical bonuses, etc. Excluded are any retrospective payments.

Total gross weekly earnings for *All other full-time adult male employees* (i.e. other than managerial, executive, etc. staff) are dissected into overtime earnings and ordinary time earnings.

*Overtime earnings* refers to that part of total gross weekly earnings (as defined above) for man-hours paid for in excess of award, standard or agreed hours of work. (The figures of average overtime earnings shown in tables on pages 258-9 are not average overtime earnings of only those employees who worked overtime, but are averages for all employees in the specified category whether or not they worked overtime.)

*Ordinary time earnings* refers to that part of total gross weekly earnings (as defined above) for award, standard or agreed hours of work. Included in relation to these hours are shift allowances, penalty rates, commissions, bonuses and incentive payments, and payments for annual and other leave taken during the specified week.

Details of numbers of full-time adult male employees in various earnings groups were obtained only in relation to total weekly earnings (i.e. including overtime earnings).

**NUMBER OF MANAGERIAL, ETC. STAFF AND ALL OTHER FULL-TIME ADULT MALES  
TOTAL WEEKLY EARNINGS GROUPS, MAY 1971(a)  
ALL INDUSTRY GROUPS (b), STATES  
TOTAL (PRIVATE AND GOVERNMENT) EMPLOYEES  
(<sup>000</sup>)**

Total weekly earnings group (\$)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Up to 43.99 . . . . .				*				*	1.1
44.00-44.99 . . . . .				0.6					0.7
45.00-45.99 . . . . .	1.4	0.3	0.7		0.1				1.3
46.00-46.99 . . . . .	1.0	1.1	2.2	0.3					4.8
47.00-47.99 . . . . .	1.8	1.0	1.7	0.9				0.1	5.7
48.00-48.99 . . . . .	1.8	1.4	1.9	1.0		1.1			6.6
49.00-49.99 . . . . .	2.3	1.7	1.7	1.0	1.5		0.1	0.1	8.8
50.00-51.99 . . . . .	7.8	6.0	4.5	3.3	2.1	1.0	0.1	0.1	24.8
52.00-53.99 . . . . .	10.0	7.5	4.7	3.9	2.0	1.4	0.1	0.1	29.8
54.00-55.99 . . . . .	11.7	10.6	7.9	4.2	3.6	1.7	0.2	0.1	40.1
56.00-57.99 . . . . .	14.5	12.6	10.8	4.6	3.3	1.7	0.1	0.2	47.9
58.00-59.99 . . . . .	18.0	14.1	8.8	6.6	3.7	1.9	0.2	0.3	53.6
60.00-64.99 . . . . .	52.9	40.3	21.9	17.2	9.9	5.4	0.4	1.2	149.1
65.00-69.99 . . . . .	53.5	44.0	23.6	19.5	12.9	6.0	0.5	1.2	161.2
70.00-74.99 . . . . .	62.1	47.6	24.1	17.6	13.4	5.9	0.6	1.2	172.6
75.00-79.99(c) . . . . .	69.7	52.8	22.8	17.5	12.6	5.9	0.7	1.4	183.4
80.00-99.99 . . . . .	224.2	159.6	55.5	54.5	41.5	15.8	2.7	5.7	559.6
100.00-119.99 . . . . .	139.7	97.6	31.6	26.3	25.8	7.9	2.5	4.8	336.3
120.00 and over . . . . .	171.6	121.5	39.9	27.5	38.2	10.3	4.7	11.5	425.3
Total . . . . .	844.0	619.9	264.3	206.7	170.8	66.1	12.8	28.0	2,212.6

(a) Pay-period which included 12 May 1971. For definitions and explanatory notes, see pages 256-7. (b) Excludes rural industry, and private domestic service. (c) Includes managerial, etc. staff earning 'up to \$79.99'.

\* Less than 50 employees.

**AVERAGE WEEKLY EARNINGS, FULL-TIME ADULT MALE EMPLOYEES  
MAY 1971(a) ALL INDUSTRY GROUPS(b), STATES  
TOTAL (PRIVATE AND GOVERNMENT) EMPLOYEES  
(\$)**

State	Managerial, etc. staff	All other full-time adult males			Total (private and govt)
		Overtime	Ordinary time	Total	
New South Wales . . . . .	146.90	11.80	79.00	90.70	98.80
Victoria . . . . .	144.90	10.60	78.30	89.00	97.90
Queensland . . . . .	129.60	9.60	73.90	83.50	89.10
South Australia . . . . .	133.70	8.70	74.70	83.40	89.20
Western Australia . . . . .	139.70	15.80	76.70	92.50	98.90
Tasmania . . . . .	131.30	8.30	76.20	84.50	90.30
Northern Territory . . . . .	153.00	18.20	91.30	109.50	114.30
Australian Capital Territory . . . . .	186.90	9.70	98.50	108.20	122.70
Australia . . . . .	143.20	11.10	77.80	88.90	96.60

For footnotes see next page.

**AVERAGE WEEKLY EARNINGS, FULL-TIME ADULT MALE EMPLOYEES  
MAY 1971(a), INDUSTRY GROUPS, AUSTRALIA  
TOTAL (PRIVATE AND GOVERNMENT) EMPLOYEES  
(\$)**

Industry group	Managerial etc. staff	All other full-time adult males			Total (private and govt)
		Overtime	Ordinary time	Total	
<b>Manufacturing—</b>					
Extracting, refining and founding of metals . . . . .	149.10	19.20	76.60	95.90	99.40
Engineering and metalworking . .	131.10	16.20	72.20	88.40	94.20
Ships, vehicles, parts and accessories	132.90	13.50	73.00	86.50	89.60
<i>Founding, engineering, vehicles,       etc. . . . .</i>	<i>133.20</i>	<i>15.90</i>	<i>73.10</i>	<i>89.00</i>	<i>93.60</i>
Textiles, clothing and footwear . .	128.60	11.60	67.60	79.20	88.30
Food, drink and tobacco . . . . .	125.80	12.40	67.40	79.90	85.30
Paper, printing, bookbinding and photography . . . . .	139.20	11.00	81.40	92.40	98.20
Chemicals, dyes, explosives, paints, non-mineral oils . . . . .	144.00	10.90	76.20	87.10	98.00
Other . . . . .	126.80	13.60	69.70	83.30	88.90
<i>Manufacturing groups . . . . .</i>	<i>132.10</i>	<i>14.10</i>	<i>72.30</i>	<i>86.40</i>	<i>91.90</i>
<b>Non-manufacturing—</b>					
Mining and quarrying . . . . .	162.80	23.40	92.10	115.50	120.80
Electricity, gas, water and sanitary services . . . . .	182.00	7.10	81.60	88.70	95.00
Building and construction . . . .	137.40	13.60	74.60	88.20	92.40
Transport, storage and communica- tion . . . . .	155.20	14.40	81.20	95.50	100.20
Finance and property . . . . .	161.70	2.70	88.80	91.50	112.50
Wholesale trade, primary produce dealing, etc. . . . .	134.30	7.40	73.70	81.10	91.50
Retail trade . . . . .	114.70	5.20	69.10	74.30	83.60
Public authority activities (n.e.i.) and community and business services . . . . .	167.50	3.40	93.90	97.40	111.10
Other industries(b) . . . . .	120.60	7.90	70.50	78.50	85.90
<i>Non-manufacturing groups . . . .</i>	<i>148.60</i>	<i>9.20</i>	<i>81.30</i>	<i>90.50</i>	<i>99.50</i>
All industry groups(c) . . . . .	143.20	11.10	77.80	88.90	96.60

(a) Pay-period which included 12 May 1971. For definitions and explanatory notes, see pages 256-7. (b) Includes amusement, hotels, cafes, personal service etc. and forestry, fishing and trapping. (c) Excludes rural in dustry, and private domestic service.

### Surveys of weekly earnings and hours, October 1962 to October 1972

Sample surveys in respect of most private employers subject to pay-roll tax (i.e. those paying more than \$400 per week in wages and salaries) have been conducted as at the last pay-period in October during recent years. Some results of the 1972 survey for private employees and comparisons with earlier such surveys are contained in the following tables. Further particulars including averages for each State are published in the annual bulletin, *Survey of Weekly Earnings and Hours* (6.1) and in the appendix to the annual Labour Report (see No. 56, 1971 pages 394-414). Preliminary results of these surveys are published in the bulletin *Survey of Weekly Earnings and Hours* (Preliminary Results) (6.28) as soon as returns from a large percentage of respondents have been processed.

In addition to surveying private employees subject to pay-roll tax in each State, the 1972 survey also surveyed (a) non-government hospitals not subject to pay-roll tax; (b) Commonwealth and State government departments, government authorities and semi-government bodies; (c) local government authorities; and (d) employees in the Northern Territory and Australian Capital Territory. However, the results in the following tables do not include those relating to employees in the above categories.



In addition to obtaining data for the calculation of average weekly earnings, average weekly hours paid for, and average hourly earnings, information on overtime and ordinary time earnings and hours for full-time employees (other than managerial, etc. staff) was obtained from surveys beginning with the October 1966 survey. The figures of average overtime earnings and average overtime hours are the averages for *all* employees (in the specified category) represented in the survey whether or not they worked overtime. The survey figures do not show the average overtime earnings or hours of only those employees who worked overtime.

Figures of average weekly earnings, average weekly hours paid for, and average hourly earnings as at the selected pay-periods are presented for males and females (adult and junior) separately by industry groups and by States. They reflect the effects of differences (and of changes between points of time) in amounts paid for the various occupations; in amounts paid for the same occupations; in occupational structures within industries; in industry structure; in degrees of business activity (incidence of overtime, etc.); and in the incidence of incentive schemes, piecework and profit-sharing scheme payments, etc.

#### Scope of survey

The results shown in the following tables are based on returns from stratified random samples of private employers subject to pay-roll tax. Employees in rural industry and in private domestic service are excluded because most employers in these two industries are not subject to pay-roll tax. Also excluded from these survey results are: employees of government and semi-government authorities; employees of religious, benevolent and other similar organisations exempt from pay-roll tax; and all employees in the Northern Territory and the Australian Capital Territory. The earnings and hours of waterside workers employed on a casual basis are excluded because they are subject to wide fluctuations for short periods such as those covered by these surveys. Waterside workers on weekly hire employed under the new permanent employment scheme are included in the surveys.

Approximately 5,100 private employers were included in the October 1972 survey and the sample represented 1,810,000 males and 860,000 female wage and salary earners.

As the results shown in the following tables are based on a sample, the resultant estimates are subject to sampling variability, that is, variations which might occur by chance because only a sample of employers was surveyed. The extent of the detail published has been determined after considering estimated measures of sampling variability. A technical note on sampling variability is included in the annual bulletin, *Survey of Weekly Earnings and Hours* (6.1).

#### Comparability of results

In addition to affecting the results of each sample survey, sampling variability also affects comparison between each year's results.

The industry classification adopted for these earnings and hours surveys from 1963 onwards (including the 1965 survey) is that used for the 1961 and 1966 population censuses.

The October 1965 Survey of Weekly Earnings was a special purpose survey on a different basis from the surveys compared in this section and, therefore, its results are not shown herein (*see* page 256).

The allocation of employees between 'Managerial, executive, professional and higher supervisory staff' and 'All other full-time employees' (as defined) depends upon the employers' interpretation of the definitions (*see* page 261).

## Definitions

The following definitions refer to terms used in the surveys and in the tables in this section.

*Employees* refers to male and female employees on the pay-roll and who received pay for the last pay-period in October.

*Adults* includes all employees 21 years of age and over and those employees who, although under 21 years of age, are paid at the adult rate for their occupation.

*Juniors* refers to those employees under 21 years of age who are not paid at the adult rate for their occupation.

*Full-time employees* refers to those employees who ordinarily work 30 hours or more a week and who received pay for the last pay-period in October. Included are 'full-time' employees on short-time; 'full-time' employees who began or ceased work during the pay-period; and 'full-time' employees on paid annual leave, paid sick leave, long service leave and paid holidays taken during the pay-period.

*Part-time employees* refers to employees who ordinarily work less than 30 hours a week and who received pay for the last pay-period in October. Employees on short-time who normally work 30 hours or more a week are classified as full-time employees.

*Other than managerial, etc. staff* includes minor supervisory employees, leading hands, clerical and office staff as well as ordinary wages employees. It excludes *managerial, executive, professional and higher supervisory staff* who, for private employees, were not further defined.

*Weekly earnings* refers to gross earnings for the last pay-period in October before taxation and other deductions have been made. It includes ordinary time earnings, overtime earnings, shift allowances, penalty rates, commission and similar payments; and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the pay-period. It includes one week's proportion of payments made other than on a weekly basis, e.g. salary paid fortnightly or monthly; paid annual or other leave taken during the pay-period; periodical payments under incentive, piecework, profit sharing schemes, etc.; commissions; annual or periodical bonuses, etc. Retrospective payments are excluded.

*Overtime earnings* refers to that part of gross weekly earnings (as defined above) for hours paid for in excess of award, standard or agreed hours of work. Overtime earnings were not reported for managerial, etc. staff.

*Ordinary time earnings* refers to that part of gross weekly earnings (as defined above) for award, standard or agreed hours of work. It includes shift allowances, penalty rates, commissions, bonuses and incentive payments, and that part of paid annual and other leave, which relates to these hours.

*Weekly man-hours paid for* refers to the sum of man-hours for which payment was made. It includes ordinary time hours, overtime hours, paid stand-by or reporting time; and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the specified pay-period. For employees paid other than weekly, hours are converted to a weekly basis. For employees who began or ceased work, or were absent without pay for any reason during the specified week, only the man-hours actually paid for are included. Where agreed hours of work are less than award hours, man-hours are based on agreed hours. Hours of work were not reported for managerial, etc. staff.

*Overtime hours* refers to hours in excess of award, standard or agreed hours of work.

*Ordinary time hours* refers to award, standard or agreed hours of work. It includes man-hours of stand-by or reporting time which are part of standard hours of work, and that part of paid annual leave, paid sick leave and long service leave taken during the specified week.

**AVERAGE WEEKLY EARNINGS AND HOURS (OVERTIME AND ORDINARY TIME)(a), FULL-TIME EMPLOYEES (OTHER THAN MANAGERIAL, ETC. STAFF)(b): INDUSTRY GROUPS AUSTRALIA(c), OCTOBER 1972(d)**

Industry group	Average weekly earnings (\$)			Average weekly hours paid for			Average weekly earnings (\$)			Average weekly hours paid for		
	Over-time earnings	Ordinary time earnings	Total	Over-time hours	Ordinary time hours	Total	Over-time earnings	Ordinary time earnings	Total	Over-time hours	Ordinary time hours	Total
<b>ADULT MALES</b>						<b>JUNIOR MALES</b>						
<b>Manufacturing—</b>												
Extracting, refining and founding of metals	16.60	87.30	103.90	5.3	38.6	44.0	4.20	49.10	53.20	1.9	38.4	40.4
Engineering and metal-working	15.40	80.70	96.20	4.9	38.4	43.3	3.80	42.10	45.80	2.1	38.3	40.4
Ships, vehicles, parts and accessories	12.20	81.20	93.40	3.8	38.4	42.2	2.50	42.40	44.90	1.4	38.4	39.8
<i>Founding, engineering, vehicles, etc.</i>	14.80	82.00	96.70	4.7	38.4	43.1	3.50	43.30	46.80	1.9	38.4	40.3
Textiles, clothing and footwear	13.00	76.00	89.00	4.8	38.7	43.4	3.20	41.10	44.30	1.9	37.9	39.8
Food, drink and tobacco	14.90	76.00	91.00	4.9	38.2	43.2	5.80	41.40	47.20	3.0	37.3	40.4
Paper, printing, book-binding and photography	11.60	90.00	101.60	3.5	39.1	42.5	3.80	47.10	50.90	2.0	39.0	41.0
Chemicals, dyes, explosives, paints, non-mineral oils	14.40	87.30	101.70	4.3	38.6	42.9	4.30	49.30	53.60	2.1	38.5	40.7
Other	15.70	77.90	93.70	5.4	38.5	43.9	4.50	38.40	42.90	2.8	38.0	40.8
<i>Manufacturing groups.</i>	14.60	80.80	95.40	4.8	38.5	43.2	4.00	42.60	46.50	2.2	38.2	40.4
<b>Non-manufacturing—</b>												
Mining and quarrying	24.00	101.20	125.30	6.9	36.6	43.5	8.30	59.70	68.00	3.9	37.7	41.6
Building and construction	20.20	87.00	107.10	5.7	38.6	44.2	3.40	47.20	50.60	1.7	39.2	40.8
Transport and storage	20.20	84.10	104.30	6.2	37.9	44.1	6.70	45.80	52.50	3.4	38.4	41.9
Finance and property	2.50	97.40	99.80	0.7	38.5	39.3	0.90	52.10	53.00	0.4	38.6	39.0
Wholesale trade, primary produce dealing, etc.	7.80	80.40	88.20	2.6	38.9	41.5	2.90	41.80	44.80	1.7	38.9	40.6
Retail trade	5.50	75.30	80.80	2.0	39.5	41.5	2.70	40.00	42.60	1.7	39.4	40.9
Other industries(e)	9.60	81.60	91.20	3.4	38.7	42.1	2.90	44.70	47.60	1.5	38.2	39.7
<i>Non-manufacturing groups</i>	12.30	84.40	96.70	3.8	38.6	42.4	2.80	44.60	47.40	1.6	39.0	40.5
All industry groups(f)	13.60	82.40	96.00	4.3	38.5	42.9	3.40	43.60	47.00	1.9	38.6	40.5
<b>ADULT FEMALES</b>						<b>JUNIOR FEMALES</b>						
<b>Manufacturing groups</b>	3.70	55.00	58.80	1.8	37.8	39.6	1.40	36.20	37.60	1.0	38.0	39.0
<b>Non-manufacturing groups</b>	1.80	60.80	62.70	0.8	38.1	38.9	0.70	39.10	39.80	0.5	38.5	38.9
All industry groups(f)	2.80	57.90	60.70	1.3	38.0	39.3	0.90	38.30	39.20	0.6	38.4	38.9

(a) Average weekly overtime and ordinary time earnings and hours are averages for all employees represented in the survey see page 261. (b) Private employees only. Excludes managerial, executive, professional and higher supervisory staff.

(c) Excludes Northern Territory and Australian Capital Territory. (d) Last pay-period in October. For definitions and particulars of scope of the survey, etc., see pages 260-1.

(e) Includes community and business services; amusement, hotels, cafés, personal service, etc.; electricity, gas, water supply and sanitary services; and forestry, fishing and trapping. (f) Excludes rural industry, and private domestic service.



**AVERAGE WEEKLY EARNINGS, FULL-TIME EMPLOYEES (OTHER THAN MANAGERIAL ETC. STAFF)(a): INDUSTRY GROUPS, AUSTRALIA(b), OCTOBER 1970, 1971 AND 1972(c)**  
(\\$)

Industry group	Adult males			Junior males			Adult females			Junior females		
	Oct. 1970	Oct. 1971	Oct. 1972	Oct. 1970	Oct. 1971	Oct. 1972	Oct. 1970	Oct. 1971	Oct. 1972	Oct. 1970	Oct. 1971	Oct. 1972
<b>Manufacturing—</b>												
Extracting, refining and founding of metals . . .	84.90	92.50	103.90	45.90	47.80	53.20	50.40	59.20	65.60	35.60	40.20	44.40
Engineering and metalworking . . .	79.50	91.30	96.20	38.40	43.00	45.80	48.30	57.40	64.10	32.20	38.30	42.20
Ships, vehicles, parts and accessories . .	78.10	89.30	93.40	36.40	41.80	44.90	48.60	58.10	65.90	32.10	38.60	44.40
Founding, engineering, vehicles, etc. . . . .	80.10	91.00	96.70	39.10	43.50	46.80	48.40	57.60	64.40	32.50	38.60	42.80
Textiles, clothing and footwear . . . . .	73.40	82.10	89.00	36.30	41.70	44.30	42.60	49.40	53.90	26.20	30.80	33.20
Food, drink and tobacco . . . . .	73.80	83.70	91.00	37.30	42.40	47.20	43.90	51.20	57.90	29.10	34.10	38.40
Paper, printing, book-binding and photography . .	86.00	94.20	101.60	41.30	47.00	50.90	46.40	52.90	59.10	29.80	33.70	36.20
Chemicals, dyes, explosives, paints, non-mineral oils . .	79.90	92.10	101.70	40.60	47.20	53.60	47.20	55.60	61.90	31.70	38.80	43.50
Other . . . . .	77.00	86.40	93.70	35.80	39.40	42.90	44.90	52.10	58.70	29.30	33.40	39.90
Manufacturing groups . . . . .	78.70	88.90	95.40	38.50	43.00	46.50	45.20	53.00	58.80	29.20	34.10	37.60
<b>Non-manufacturing—</b>												
Mining and quarrying . . . . .	104.00	118.10	125.30	53.00	61.60	68.00	58.90	65.90	70.30	37.80	43.60	46.10
Building and construction . . . . .	90.40	102.90	107.10	41.60	48.30	50.60	52.50	59.30	64.30	32.70	37.10	37.90
Transport and storage . . . . .	90.00	96.10	104.30	43.30	49.20	52.50	55.10	61.60	67.80	33.70	37.90	42.10
Finance and property . . . . .	83.60	89.40	99.80	43.10	47.10	53.00	54.30	60.10	67.20	37.20	39.80	44.10
Wholesale trade, primary produce dealing, etc. . . . .	74.20	81.60	88.20	37.00	39.90	44.80	49.90	55.80	61.50	31.60	36.10	40.50
Retail trade . . . . .	66.80	76.20	80.80	34.70	37.70	42.60	45.80	51.90	59.20	28.50	32.10	36.10
Other industries(d) . . . . .	77.00	85.30	91.20	40.30	45.30	47.60	50.30	57.40	63.70	32.90	37.20	40.10
Non-manufacturing groups . . . . .	81.60	90.50	96.70	38.90	43.20	47.40	49.70	56.10	62.70	32.20	35.90	39.80
<b>All industry groups(e) . . . . .</b>	<b>80.00</b>	<b>89.60</b>	<b>96.00</b>	<b>38.70</b>	<b>43.10</b>	<b>47.00</b>	<b>47.30</b>	<b>54.40</b>	<b>60.70</b>	<b>31.30</b>	<b>35.40</b>	<b>39.20</b>

(a) Private employees only. Excludes managerial, executive, professional and higher supervisory staff. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. For definitions, particulars of scope of the surveys, etc., see pages 260-1. (d) Includes community and business services; amusement, hotels, cafés, personal service, etc.; electricity, gas, water and sanitary services; and forestry, fishing and trapping. (e) Excludes rural industry, and private domestic service.

**AVERAGE WEEKLY HOURS PAID FOR, FULL-TIME EMPLOYEES (OTHER THAN  
MANAGERIAL, ETC. STAFF)(a): INDUSTRY GROUPS, AUSTRALIA(b)  
OCTOBER 1970, 1971 AND 1972(c)**

Industry group	Adult males			Junior males			Adult females			Junior females		
	Oct. 1970	Oct. 1971	Oct. 1972	Oct. 1970	Oct. 1971	Oct. 1972	Oct. 1970	Oct. 1971	Oct. 1972	Oct. 1970	Oct. 1971	Oct. 1972
<b>Manufacturing—</b>												
Extracting, refining and founding of metals . . . . .	45.0	43.8	44.0	42.2	40.3	40.4	40.5	39.7	40.0	40.3	39.7	39.3
Engineering and metal-working . . . . .	44.8	44.1	43.3	41.3	41.4	40.4	40.5	40.2	39.9	39.3	39.5	39.4
Ships, vehicles, parts and accessories . . . . .	43.0	42.6	42.2	41.4	40.8	39.8	39.5	39.9	40.0	39.4	39.7	39.7
Founding, engineering, vehicles, etc. . . . .	44.4	43.7	43.1	41.5	41.1	40.3	40.3	40.1	39.9	39.4	39.6	39.4
Textiles, clothing and footwear . . . . .	43.6	43.7	43.4	40.4	40.8	39.8	39.5	39.2	39.3	39.5	38.8	38.6
Food, drink and tobacco . . . . .	43.6	43.6	43.2	40.7	40.7	40.4	39.1	39.3	39.8	38.9	38.8	38.9
Paper, printing, book-binding and photography . . . . .	42.7	42.3	42.5	41.2	41.1	41.0	39.5	39.6	39.7	39.5	39.3	38.8
Chemicals, dyes, explosives, paints, non-mineral oils . . . . .	42.9	42.5	42.9	40.6	40.5	40.7	39.6	39.2	38.6	38.6	39.0	38.5
Other . . . . .	44.2	43.8	43.9	40.4	40.1	40.8	39.8	39.8	39.7	38.8	38.8	39.8
<b>Manufacturing groups . . . . .</b>	<b>44.0</b>	<b>43.5</b>	<b>43.2</b>	<b>41.1</b>	<b>40.8</b>	<b>40.4</b>	<b>39.7</b>	<b>39.6</b>	<b>39.6</b>	<b>39.3</b>	<b>39.0</b>	<b>39.0</b>
<b>Non-manufacturing—</b>												
Mining and quarrying . . . . .	44.8	44.0	43.5	42.2	41.6	41.6	38.9	39.0	38.9	38.5	38.6	38.8
Building and construction . . . . .	44.8	45.6	44.2	41.8	41.6	40.8	39.4	39.3	39.1	39.6	39.4	39.6
Transport and storage . . . . .	46.1	44.9	44.1	42.1	41.4	41.9	39.3	39.4	39.5	39.4	39.3	39.4
Finance and property . . . . .	38.5	38.9	39.3	39.0	39.0	39.0	37.9	37.8	37.7	38.4	38.5	38.1
Wholesale trade, primary produce dealing, etc. . . . .	41.9	41.7	41.5	40.4	40.2	40.6	38.7	38.7	38.7	38.8	38.8	39.1
Retail trade . . . . .	41.8	41.4	41.5	41.1	40.8	41.0	39.3	39.5	39.6	39.7	39.8	39.8
Other industries(d) . . . . .	42.2	42.0	42.1	39.6	39.7	39.7	39.1	38.9	38.9	37.8	38.0	37.7
<b>Non-manufacturing groups . . . . .</b>	<b>43.0</b>	<b>42.8</b>	<b>42.4</b>	<b>40.6</b>	<b>40.4</b>	<b>40.5</b>	<b>38.9</b>	<b>38.9</b>	<b>38.9</b>	<b>38.9</b>	<b>39.0</b>	<b>38.9</b>
<b>All industry groups(e) . . . . .</b>	<b>43.5</b>	<b>43.2</b>	<b>42.9</b>	<b>40.8</b>	<b>40.6</b>	<b>40.5</b>	<b>39.4</b>	<b>39.3</b>	<b>39.3</b>	<b>39.0</b>	<b>39.0</b>	<b>38.9</b>

(a) Private employees only. Excludes managerial, executive, professional and higher supervisory staff. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. For definitions, particulars of scope of the surveys, etc., see pages 260-1. (d) Includes community and business services; amusement, hotels, cafés, personal service, etc.; electricity, gas, water and sanitary services; and forestry, fishing and trapping. (e) Excludes rural industry, and private domestic service.

In the following table the average weekly earnings, average weekly hours paid for, and average hourly earnings at the last pay-period in October for the years 1969 to 1972 are shown for full-time males and females (adult and junior).

**AVERAGE EARNINGS AND HOURS, FULL TIME EMPLOYEES (OTHER THAN  
MANAGERIAL, ETC. STAFF)(a): ALL INDUSTRY GROUPS, AUSTRALIA(b)  
OCTOBER 1969 TO 1972(c)**

	Average weekly earnings (\$)				Average weekly hours paid for				Average hourly earnings (\$)			
	Oct. 1969	Oct. 1970	Oct. 1971	Oct. 1972	Oct. 1969	Oct. 1970	Oct. 1971	Oct. 1972	Oct. 1969	Oct. 1970	Oct. 1971	Oct. 1972
Adult males . . . . .	74.00	80.00	89.60	96.00	43.6	43.5	43.2	42.9	1.70	1.84	2.08	2.24
Junior males . . . . .	35.80	38.70	43.10	47.00	40.9	40.8	40.6	40.5	0.88	0.95	1.06	1.16
Adult females . . . . .	43.20	47.30	54.40	60.70	39.4	39.4	39.3	39.3	1.10	1.20	1.39	1.55
Junior females . . . . .	28.60	31.30	35.40	39.20	39.0	39.0	39.0	38.9	0.73	0.80	0.91	1.01

(a) Private employees only. Excludes managerial, executive, professional, and higher supervisory staff. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. For definitions, particulars of scope of the surveys, etc., see pages 260-1.

**AVERAGE WEEKLY EARNINGS, FULL-TIME MALE MANAGERIAL, EXECUTIVE, ETC.  
STAFF(a): INDUSTRY GROUPS, AUSTRALIA(b), OCTOBER 1969 TO 1972(c)**

(\$)

<i>Industry group</i>	<i>October 1969</i>	<i>October 1970</i>	<i>October 1971</i>	<i>October 1972</i>
<b>Manufacturing—</b>				
Extracting, refining and founding of metals . . . . .	135.10	148.50	157.50	171.40
Engineering and metalworking . . . . .	118.30	127.70	141.30	150.00
Ships, vehicles, parts and accessories . . . . .	117.00	124.30	137.70	142.40
<i>Founding, engineering, vehicles, etc.</i> . . . .	119.40	129.00	142.10	150.30
Textiles, clothing and footwear . . . . .	114.80	120.80	136.50	142.70
Food, drink and tobacco . . . . .	112.40	123.90	138.70	146.70
Paper, printing, bookbinding and photography . . . . .	117.90	127.80	142.70	151.60
Chemicals, dyes, explosives, paints, non-mineral oils . . . . .	126.80	133.40	153.00	167.30
Other . . . . .	112.70	128.00	136.50	145.30
<i>Manufacturing groups</i> . . . . .	117.20	127.60	141.00	149.50
<b>Non-manufacturing—</b>				
Mining and quarrying . . . . .	147.40	161.90	177.00	190.00
Building and construction . . . . .	117.10	130.50	140.40	150.60
Transport and storage . . . . .	116.20	124.50	137.00	143.10
Finance and property . . . . .	130.30	156.80	154.30	173.40
Wholesale trade, primary produce dealing, etc. . . . .	118.40	125.60	136.70	146.40
Retail trade . . . . .	97.00	105.70	114.10	124.70
Other industries(d) . . . . .	114.80	124.80	134.20	138.70
<i>Non-manufacturing groups</i> . . . . .	116.60	129.40	136.90	147.40
<b>All industry groups(e)</b> . . . . .	<b>116.90</b>	<b>128.70</b>	<b>138.50</b>	<b>148.30</b>

(a) Private employees only. Includes managerial, executive, professional and higher supervisory staff. For definitions, particulars of scope of the surveys, etc., see pages 260-1. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. (d) Includes community and business services; amusement, hotels, cafés, personal service, etc.; electricity, gas, water and sanitary services; and forestry, fishing and trapping. (e) Excludes rural industry, and private domestic service.

**AVERAGE WEEKLY EARNINGS, FULL-TIME FEMALE MANAGERIAL  
EXECUTIVE, ETC. STAFF(a): INDUSTRY GROUPS, AUSTRALIA(b)  
OCTOBER 1969 TO 1972(c)**

(\$)

<i>Survey</i>	<i>Manufacturing groups</i>	<i>Non- manufacturing groups</i>	<i>All industry groups(e)</i>
<b>October(c)—</b>			
1969 . . . . .	64.90	68.00	67.10
1970 . . . . .	72.70	71.30	71.70
1971 . . . . .	80.60	81.20	81.10
1972 . . . . .	87.30	88.00	87.80

For footnotes see table above.

**AVERAGE EARNINGS AND HOURS, PART-TIME EMPLOYEES(a)  
AUSTRALIA(b), OCTOBER 1969 TO 1972(c)**

<i>Survey</i>	<i>Average weekly earnings (\$)</i>				<i>Average weekly hours paid for</i>				<i>Average hourly earnings (\$)</i>			
	<i>Adult males</i>	<i>Junior males</i>	<i>Adult females</i>	<i>Junior females</i>	<i>Adult males</i>	<i>Junior males</i>	<i>Adult females</i>	<i>Junior females</i>	<i>Adult males</i>	<i>Junior males</i>	<i>Adult females</i>	<i>Junior females</i>
<b>October(c)—</b>												
1969 . . . . .	23.40	5.70	21.70	7.00	14.1	7.1	17.6	9.4	1.66	0.81	1.23	0.74
1970 . . . . .	26.60	6.10	22.90	6.00	14.8	7.1	17.4	6.9	1.80	0.85	1.32	0.86
1971 . . . . .	28.60	6.50	26.40	7.00	14.8	6.9	17.5	7.4	1.94	0.94	1.51	0.94
1972 . . . . .	29.60	8.00	30.10	6.80	14.3	7.9	17.6	6.8	2.06	1.02	1.71	1.00

(a) Private employees only. Part-time employees are those who normally work less than 30 hours a week. For definitions, particulars of scope of the surveys, etc., see pages 260-1. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October.



## Determination of wage rates in Australia

Before June 1967, the concept of a basic or living wage was common to wage rates determined by industrial authorities in Australia. Initially, the concept of a basic wage (for adult males) was interpreted as the wage necessary to maintain an average employee and his family in a reasonable state of comfort. However, it was later generally accepted that the basic wage should be fixed at the highest amount which the economy could sustain and that the dominant factor was the capacity of the community to carry the resultant wage levels. Basic wages were determined for adult females as well as for adult males.

In addition to the basic wage, secondary wage payments, including margins for skill, etc., and various kinds of loadings peculiar to the occupation or industry, were determined by industrial authorities. The basic wage and the secondary wage made up the minimum wage rate for a particular occupation.

In the following paragraphs is set out a brief history of the determination of wage rates in Australia by Commonwealth and State industrial authorities. For more detailed information including the history of basic wage determination in Australia see previous issues of the Year Book and the annual *Labour Report*.

### Commonwealth Basic Wages and Margins

For a brief history of Commonwealth basic wages and margins, see earlier issues of the Year Book and the *Labour Report*. As a result of a decision of the Commonwealth Conciliation and Arbitration Commission in the National Wage Cases of 1967, basic wages and margins were eliminated from Commonwealth awards and total wages were introduced to operate from the beginning of the first pay-period to commence on or after 1 July 1967.

For tables showing Commonwealth basic wage rates for adult males and adult females see the Appendix to *Labour Report* No. 56, 1971.

### Commonwealth total wages

In the national wage cases of 1964 and 1965 applications by employers that basic wages and margins should be deleted from Commonwealth awards and total wages introduced were rejected by the Commonwealth Conciliation and Arbitration Commission. However, in its decisions in the Basic Wage, Margins and Total Wage Cases of 1966 the Commission decided to defer the conversion of the wage structure to the basis of a single wage pending further consideration of the present structure of marginal rates and further argument. As a result of the National Wage Cases of 1967, in which the employers again applied for a total wage, the Commonwealth Conciliation and Arbitration Commission announced the elimination of basic wages and margins from Commonwealth awards and the introduction of total wages. The total wages were arrived at by adding an amount of \$1 a week to the weekly award wages for each adult male and adult female classification to operate from the beginning of the first pay-period to commence on or after 1 July 1967.

Trade unions unsuccessfully challenged in the High Court the abolition of basic wages and the adoption of total wages by the Commonwealth Commission.

As a result of its decision in the Basic Wage, Margins and Total Wage Cases of 1966, the Commonwealth Conciliation and Arbitration Commission, over the period September 1966 and November 1967, undertook a work value inquiry concerning classifications appearing in the Metal Trades Award. On 11 December 1967 the Commission issued a majority decision (Gallagher J. and Commissioner Winter, with Moore J. dissenting), granting increases to adult male classifications. Subsequently the Commission decided that these increases would operate in two stages, namely, from January 1968 and August 1968.

In its decisions in National Wage Cases, the Commonwealth Conciliation and Arbitration Commission increased total award rates of pay for adult male and female employees by \$1.35 a week in October 1968, by 3 per cent in December 1969, by 6 per cent in January 1971, and by \$2.00 a week in May 1972. Increases were also made to the minimum wage for adult males (see next page).

On 15 December 1972 the Commission issued its decision in the National Wage and Equal Pay Cases 1972. It decided that all matters in which national wage and minimum wage increases were sought be adjourned until 13 March 1973. The claim that the minimum wage for adult males be applied to adult females was rejected. The Commission decided to apply to all of its awards the principle of 'equal pay for work of equal value' for females (see page 267).

### Commonwealth minimum wage

In July 1966 the Commonwealth Conciliation and Arbitration Commission, in its decisions in the Basic Wage, Margins and Total Wage Cases of 1966, inserted in Commonwealth awards provisions for a minimum wage for adult males. The Commission said that it had given detailed consideration to lower paid classifications in the Metal Trades Award and had decided to grant some immediate relief to low wage earners. The Commission in its judgment said that it intended to insert a new provision in awards by which it would be prescribed that no adult male employee should be paid as a weekly wage for working the standard hours of work an amount less than the minimum wage, i.e. his appropriate basic wage rate plus \$3.75 a week. The minimum wage was prescribed for adult male employees only and was applied for all purposes of the award, for example, in calculation of overtime and other penalty rates, piece-work, casual employment, sick leave and annual leave. The Commission stated that the provision for a minimum wage for adult male employees was designed to meet the circumstances of employees in the lowest classifications who were in receipt of award rates and no more. It was not intended to affect the wage of any employee who was already receiving the prescribed minimum through over-award payment. The provision for a minimum wage for adult males operated from the beginning of the first pay-period to commence on or after 11 July 1966. The rates of minimum wage for adult males inserted in Commonwealth awards ranged from \$34.75 to \$37.25 a week for State capital cities. As a result of the decisions of the Commission in the National Wage Cases, the minimum wages for adult males were increased by \$1 a week in July 1967, by \$1.35 a week in October 1968, by \$3.50 a week in December 1969, by \$4.00 a week in January 1971, and by \$4.70 a week in May 1972.

### Equal pay

Two benches of the Commonwealth Conciliation and Arbitration Commission sat jointly from 25 February 1969 to 22 May 1969 to take evidence and hear argument on trade union claims for equal pay between the sexes in the Equal Pay Cases 1969. Both benches of the Commission reached a common conclusion and on 19 June 1969 published their decision and reasons for their decision. The Commission said it was prepared to implement the principle of equal pay for equal work by introducing into Commonwealth awards and determinations the principles contained in State acts on equal pay. The Commission stated that no increases should be granted to adult females without an examination of the work done. It also suggested a number of principles to be applied in deciding applications for equal pay. The Commission decided that implementation of equal pay should be spread over a period so that female rates of pay affected by this decision should become equal to the male rate from the beginning of the first pay-period to commence on or after 1 January 1972. For further details of the Commission's decision see *Labour Report* No. 56, 1971, pages 199–202.

On 15 December 1972 the Commonwealth Conciliation and Arbitration Commission, in its decision in the National Wage and Equal Pay Cases 1972, outlined the principle of 'equal pay for work of equal value' for adult and junior females, which is to be applied to all Commonwealth awards and determinations. The Commission stated that the principle meant the fixation of award rates of pay by a consideration of the work performed irrespective of the sex of the worker. The eventual outcome would be a single award rate for an occupational group or classification payable to both male and female employees. Female rates are to be determined by work value comparisons, where value of the work refers to worth in terms of award wage or salary fixation and not worth to the employer. The principle has no application to the minimum wage for adult males.

The Commission decided that implementation of the above principle be by agreement or arbitration, and generally take place by three equal instalments so that one-third of any increase is payable no later than 31 December 1973, half of the remainder by 30 September 1974, and the balance by 30 June 1975.

The Commission decided that the 1969 equal pay principles (see above) will continue to apply in appropriate cases.

For details of equal pay provisions under State awards, etc., see *Labour Report* No. 56, 1971, pages 210–11.

## Determination of wage rates in State awards, etc.

### New South Wales

The first determination of a standard living wage for adult male employees under New South Wales State awards operated from 16 February 1914, when the Court of Arbitration fixed the rate at \$4.80 a week for the metropolitan area. The first living wage for adult females (\$3.00 a week) was declared by the Board of Trade to operate from 17 December 1918.



Legislation operative from 1 January 1968 determined the basic wage for adult males at \$34.50 a week and the basic wage for adult females at \$26.10 a week. The legislation also provided for the adjustment of wage rates in State awards by the Industrial Commission subsequent to a decision of the Commonwealth Conciliation and Arbitration Commission to vary Commonwealth wage rates wholly or partly on economic grounds. Changes in the State basic wage for adult males shall not be more than the amount of increase in Commonwealth minimum wages for adult males, and the increase in the adult female basic wage not less than 75 per cent of the increase in the male basic wage. The Industrial Commission and Conciliation Committees were given power to include provisions for minimum wages for adult males or adult females in State awards.

Subsequent to decisions of the Commonwealth Conciliation and Arbitration Commission in National Wage Cases, the Industrial Commission of New South Wales increased the basic wages for adult males and adult females by \$1.35 a week in October 1968; the adult male basic wage by \$1.05 a week and the adult female basic wage by 85 cents a week in December 1969; the basic wage for adult males by \$2.20 a week and the basic wage for adult females by \$1.70 a week from 1 January 1971; and the basic wages for adult males and adult females by \$2.00 a week on and from 19 May 1972. Marginal rates of pay in State awards were increased by 3 per cent in December 1969 and by 6 per cent in January 1971.

Further information on New South Wales basic wages is published in the annual *Labour Report*. State basic wage rates for Sydney are published in the Appendix to *Labour Report* No. 56, 1971.

### Victoria

In Victoria, Wages Boards are constituted for industry groups or occupations from representatives of employers and employees with an independent chairman to determine rates of wages and conditions of work.

Subsequent to the decisions of the Commonwealth Conciliation and Arbitration Commission in the National Wage Cases of 1967 (see page 266), the Industrial Appeals Court decided that basic wages and margins for adult males and adult females should be deleted from Wages Board determinations and that wage rates expressed as total wages should operate from the beginning of the first pay-period in July 1967. At the same time total wages for both adult males and adult females were increased by \$1 a week.

Following decisions of the Commonwealth Conciliation and Arbitration Commission in National Wage Cases, total wages prescribed for both adult males and adult females in Wages Board determinations were increased by \$1.35 in October 1968, by 3 per cent in December 1969, by 6 per cent in January 1971, and by \$2.00 a week in May 1972. In December 1969 the Industrial Appeals Court ordered that a minimum wage for adult males of \$42.30 a week should operate in all determinations. In January 1971 the minimum wage for adult males was increased by \$4 a week and in May 1972 by \$4.70 a week.

For further information on the operation of Victorian Wages Board determinations see the annual *Labour Report*. Basic wage rates, general increases in total rates of pay, and rates of minimum wage for adult males are published in the Appendix to *Labour Report* No. 56, 1971.

### Queensland

The first formal declaration of a basic wage in Queensland determined a basic wage of \$8.50 for adult males and \$4.30 for adult females to operate from 1 March 1921. Prior to this declaration the rate of \$7.70 a week for adult males had been generally recognised in awards as the 'basic' or 'living' wage.

Since 1961 the full bench of the Industrial Conciliation and Arbitration Commission, consisting of not less than three Commissioners, has power to make declarations concerning the basic wage for males and females and the standard hours of work. The basic wage for adult males must be sufficient to maintain an employee, his wife, and family of three children in a fair and average standard of comfort. The basic wage for adult females should be not less than is sufficient to enable an employee to support herself in a fair and average standard of comfort. All persons interested must be given an opportunity to be heard before any general declaration regarding the basic wage is made, and the Commission must take into consideration any probable economic effect of such declaration.

Following the decision of the Commonwealth Conciliation and Arbitration Commission to increase total wages by \$1 a week in July 1967, the Industrial Commission increased all award rates of pay for both adult males and adult females by \$1 per week to operate from 3 July 1967. Subsequently the Commission decided that this \$1 increase would be absorbed in basic wage rates.



The Industrial Conciliation and Arbitration Commission increased the basic wages for adult males and adult females by \$1.35 a week in October 1968; the basic wage for adult males by \$1.10 a week, the basic wage for adult females by 80 cents a week and the marginal content of award rates of pay by 3 per cent in December 1969; and the basic wage for adult males by \$2.20 a week, the basic wage for adult females by \$1.70 a week, and the marginal content of award wages by 6 per cent in January 1971. The Commission further increased the basic wage for adult males by 95 cents a week and the basic wage for adult females by 75 cents a week in December 1971; the basic wage for adult males by 80 cents a week and the basic wage for adult females by 60 cents a week in March 1972; and the basic wage for adult males by 40 cents a week and the basic wage for adult females by 75 cents a week in May 1972. In February 1973, the Commission increased the basic wage for adult males by \$1.30 to \$42.30 a week for the Eastern District of the Southern Division (including Brisbane) and the basic wage for adult females by \$1.00 to \$32.85 a week for the same area.

A guaranteed minimum wage for adult males of \$42.80 a week for the Eastern District of the Southern Division (including Brisbane) was awarded in May 1970, increased to \$46.80 a week in January 1971, to \$51.50 a week in May 1972 and to \$52.80 a week in February 1973.

For other areas of the State, district allowances are added to these rates (*see Labour Report* No. 56, 1971, page 206).

For further particulars of basic wage determination in Queensland *see the annual Labour Report*. Tables of basic wages and rates of minimum wage for adult males are published in the Appendix to *Labour Report* No. 56, 1971.

### South Australia

The first declaration of a living wage for adult male employees in the metropolitan area was \$7.95 a week operative from 4 August 1921. The first adult female living wage of \$3.50 a week operated from 1 September 1921.

Following increases in rates of pay in Commonwealth awards, since 1967 rates prescribed in South Australian State awards have been increased as set out below. The State living wages for both adult males and adult females were increased by \$1 a week in July 1967 and by \$1.35 a week in October 1968. In December 1969 an 'economic loading' of 3 per cent of the sum of the living wage and margins was included in all awards. In January 1971, this 'economic loading' was absorbed in the living wage and margins, and these were further increased by 6 per cent. In May 1972 the State living wages for adult males and adult females were increased by \$2.00 a week.

A minimum wage for adult males of \$36.05 a week was introduced in September 1966. This wage was increased by \$1 a week in July 1967, by \$1.35 a week in October 1968, by \$3.50 a week in December 1969, by \$4 a week in January 1971, and by \$4.70 a week in May 1972.

For further information on South Australian living wages *see the annual Labour Report*. Tables of living wages and rates of minimum wage for adult males are published in the Appendix to *Labour Report* No. 56, 1971.

### Western Australia

The first declaration of the basic wage by the Court of Arbitration operated from 1 July 1926, when rates of \$8.50 for adult males and \$4.59 for adult females were fixed.

Legislation operative from 22 November 1968 fixed the State basic wage for adult males at \$35.45 and for adult females at \$27.08 a week. The legislation also provided for the Commission to review the basic wage at least every twelve months, the variations in the basic wage to take effect only after the expiration of twelve months from the last variation unless there were special reasons. The Commission was also required, upon application, to insert in awards provision for equal pay for male and female workers performing work of the same or like nature and of equal value. If application for equal pay was made before 30 June 1970 the difference in male and female basic wages would be removed not later than 1 January 1972. The equal pay provisions do not apply to persons engaged in work essentially or usually performed by female workers but upon which males may be employed.

The Western Australian Industrial Commission increased the basic wage for adult males by \$1.00 a week in November 1968, by \$2.00 a week in October 1970, by \$1.00 a week in October 1971, and by \$1.00 a week in June 1972; and the basic wage for adult females by 80 cents a week in November 1968, by \$1.52 a week in October 1970, by \$1.50 a week in October 1971, and by \$1.50 a week in June 1972.

The minimum wage for adult males of \$36.55 a week awarded in April 1967 was increased by \$1.00 a week in July 1967, by \$1.35 a week in October 1968, by \$3.50 a week in December 1969, by \$7.50 a week in October 1970, by \$2.50 a week in October 1971, and by \$2.00 a week in June 1972.

On 26 October 1970 the Commission decided that awards would provide for additions to award rates for adult males to raise their wage rates for ordinary hours of work to 110 per cent of the sum of the basic wage and margin. This provision would not apply to those adult males who were already in receipt of this amount by virtue of award provisions or otherwise. This provision would operate from the date of amendment of each award, the first such amendment being inserted into awards in October 1970.

More detailed information on State basic wages in Western Australia appears in the annual *Labour Report*. Basic wage rates and rates of minimum wage for adult males are published in the Appendix to *Labour Report* No. 56, 1971.

### Tasmania

Wages Boards are constituted for a number of industries from representatives of employers and employees with an independent chairman (common to all Wages Boards) with power to determine rates of wage in each industry.

Subsequent to decisions of the Commonwealth Conciliation and Arbitration Commission in National Wage Cases, Tasmanian Wages Boards varied their determinations as follows. The basic wages for adult males and adult females were increased by \$1.00 a week in either July or August 1967, and by \$1.35 a week in October 1968; the adult male basic wage was increased by \$1.05 a week, the adult female basic wage by 80 cents a week and the marginal content of award rates of pay by 3 per cent in December 1969; the basic wage for adult males was further increased by \$2.20 a week, the basic wage for adult females by \$1.70 a week and the marginal content of award rates of pay by 6 per cent in January 1971. The basic wages for adult males and adult females were increased by \$2.00 a week in May 1972.

A minimum wage for adult males of \$38.15 a week was introduced into Wages Board determinations in July 1967. This was increased by \$2.30 a week in October 1968, by \$2.55 a week in December 1969, by \$4 a week in January 1971, and by \$4.70 a week in May 1972.

Further details of basic wages in Tasmanian Wages Board determinations are published in the annual *Labour Report*. Basic wage rates and rates of minimum wage for adult males are published in the Appendix to *Labour Report* No. 56, 1971.

### Annual leave

The majority of employees in Australia at present receive at least three weeks' paid annual leave. In 1964 State government employees in New South Wales were granted four weeks' paid annual leave and in 1971 South Australian government employees also obtained this benefit. As from 1 January 1973 employees of the Commonwealth government were granted four weeks' annual leave.

In December 1971, the Commonwealth Conciliation and Arbitration Commission rejected claims by the unions for four weeks' leave, and for an extra week's pay while on leave. The decision on the claim for an increase in the award amount of weekly payment when on leave was deferred until after the hearing of the National Wage Cases 1971-72. On 7 June 1972 the Commission handed down its decision on this claim. It decided that, in general, payments for annual leave should include in addition to normal award rates of pay, over-award payments for ordinary hours of work, shift-work premiums, service grants, and certain allowances (industry, climatic, regional, etc., leading hand, first-aid, tool and qualification allowances). Generally speaking, employers paying an annual leave bonus would not be required to pay both the bonus and the above payments. Overtime payments, disability rates such as confined spaces and dirty work, and certain allowances (camping, travelling, car and meal allowances) should generally be excluded from annual leave payments. The provisions in each award are to be considered separately, together with the appropriate date of operation. For those awards under which the application was made in this case, the date of operation was set as 1 November 1972.

More detailed information on Commonwealth and State annual leave provisions appears in the annual *Labour Report*.

### Long service leave

Paid long service leave, i.e. leave granted to workers who remain with the one employer over an extended period of time, has been included in the provisions of Commonwealth and State industrial legislation and industrial awards. After fifteen years' continuous employment with the one employer, most employees in Australia are now entitled to at least thirteen weeks' paid long service leave. Some employees of Commonwealth and State governments and employees in certain industries are entitled to long service leave of a higher standard. In all cases the transfer of ownership of a business does not constitute a break in continuity of service with the same employer. Further information is contained in the annual *Labour Report*.

## INDUSTRIAL DISPUTES

Detailed information regarding industrial disputes involving stoppages of work is given in the *Labour Report*. A table showing statistics of industrial disputes for each year from 1913 is contained in the Appendix to *Labour Report* No. 56, 1971. Current statistics are published in the quarterly bulletin *Industrial Disputes* (6.6). Preliminary monthly figures are published in the bulletin *Industrial Disputes* (6.27).

Particulars of all disputes in progress during the year are included in the annual figures, whether the dispute commenced in that year or was in progress at the beginning of the year. Consequently, details of 'the number of disputes' and 'workers involved' in disputes which commenced in any year, and were still in progress during the following year, are included in the figures for both years.

The following table gives, for Australia as a whole, particulars of industrial disputes which were in progress during 1972, classified according to industry groups.

INDUSTRIAL DISPUTES(a): INDUSTRY GROUPS, AUSTRALIA, 1972

Industry group	Number	Workers involved ('000)			Working days lost ('000)	Estimated loss in wages (\$'000)
		Directly	Indirectly (b)	Total		
Agriculture, grazing, etc. . . . .	1	*	..	*	*	0.4
Coal mining . . . . .	151	33.0	0.5	33.6	60.8	1,026.5
Other mining and quarrying . . . . .	61	13.4	3.6	16.9	62.0	1,156.7
Engineering, metals, vehicles, etc. . . . .	787	495.9	9.5	505.4	620.2	9,775.8
Textiles, clothing and footwear . . . . .	10	1.2	0.2	1.4	3.2	37.3
Food, drink and tobacco . . . . .	229	76.6	13.0	89.6	179.1	2,372.9
Sawmilling, furniture, etc. . . . .	4	0.2	*	0.2	1.9	25.7
Paper, printing, etc. . . . .	23	6.6	0.2	6.8	45.7	776.9
Other manufacturing . . . . .	160	53.9	2.3	56.2	224.7	3,489.1
<b>Total Manufacturing . . . . .</b>	<b>1,213</b>	<b>634.4</b>	<b>25.3</b>	<b>659.7</b>	<b>1,074.8</b>	<b>16,477.6</b>
Building and construction . . . . .	261	130.7	1.9	132.6	411.7	7,522.6
Railway and tramway services . . . . .	53	50.3	39.5	89.8	125.8	1,816.0
Road and air transport . . . . .	87	14.7	1.6	16.2	46.8	777.3
Shipping . . . . .	50	3.5	0.1	3.6	13.5	208.5
Stevedoring . . . . .	235	52.9	..	52.9	39.2	561.1
Amusement, hotels, personal service, etc. . . . .	22	26.5	*	26.5	44.3	693.3
Other industries(c) . . . . .	164	81.8	0.1	82.0	131.3	1,834.6
<b>Total . . . . .</b>	<b>2,298</b>	<b>1,041.2</b>	<b>72.6</b>	<b>1,113.8</b>	<b>2,010.3</b>	<b>32,074.4</b>

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. (b) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute. (c) Includes communication; finance and property; wholesale and retail trade; public authority (n.e.i.); and community and business services.

\* Less than 50.

A graph on plate 25, page 272 shows, for the years 1960 to 1972, the working days lost as a result of industrial disputes in the main industry groups.

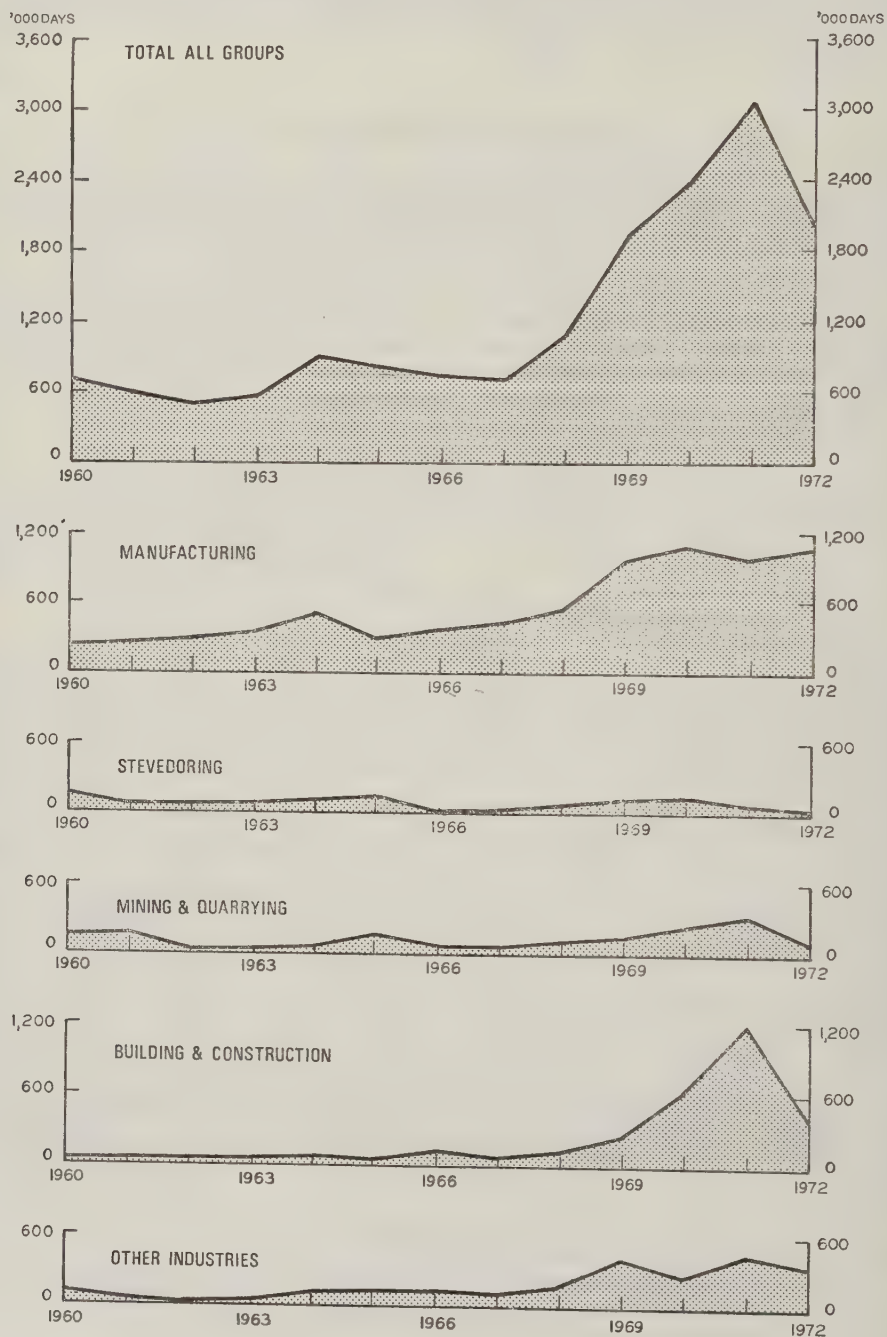
The next table, page 273, gives particulars of the number of industrial disputes in each State and Territory, together with the number of workers involved and the losses in working days and wages caused by disputes which were current during each of the years 1968 to 1972.



## INDUSTRIAL DISPUTES: AUSTRALIA

1960 TO 1972

WORKING DAYS LOST—INDUSTRY GROUPS



## INDUSTRIAL DISPUTES(a): STATES AND TERRITORIES, 1968 TO 1972

State or Territory	Year	Number	Workers involved ('000)			Working days lost ('000)	Estimated loss in wages (\$'000)
			Directly	Indirectly (b)	Total		
New South Wales.	1968	965	345.0	10.5	355.5	583.4	6,653.5
	1969	1,133	507.9	13.8	521.7	743.8	8,666.3
	1970	1,484	703.7	36.9	740.6	1,393.6	17,516.5
	1971	1,236	613.1	30.6	643.7	1,887.5	28,218.2
	1972	1,174	509.2	6.9	516.1	866.8	13,957.2
Victoria	1968	327	169.3	3.5	172.8	243.9	2,731.3
	1969	367	336.7	19.8	356.4	717.2	8,619.6
	1970	447	323.9	9.1	333.0	510.8	6,793.7
	1971	362	366.5	13.5	380.1	689.6	9,726.5
	1972	377	292.0	46.2	338.2	638.4	9,656.0
Queensland	1968	193	116.7	3.5	120.2	158.6	1,701.2
	1969	253	215.0	3.5	218.5	238.6	2,523.6
	1970	378	153.7	5.2	158.9	179.2	2,413.1
	1971	441	167.9	4.3	172.2	271.4	4,009.1
	1972	442	146.3	10.2	156.5	292.2	4,973.4
South Australia	1968	83	38.0	1.4	39.4	51.1	514.6
	1969	72	101.1	1.7	102.8	129.0	1,551.4
	1970	156	48.9	8.1	57.0	93.1	1,123.1
	1971	135	59.3	4.8	64.1	111.2	1,484.9
	1972	111	48.2	1.7	49.8	60.9	858.0
Western Australia.	1968	70	18.3	0.4	18.7	21.8	281.8
	1969	104	57.0	2.1	59.1	101.4	1,284.2
	1970	125	44.4	2.1	46.5	141.1	1,963.3
	1971	132	30.8	5.0	35.8	69.4	1,166.4
	1972	105	24.2	4.1	28.3	94.6	1,677.2
Tasmania	1968	28	7.5	0.3	7.8	13.0	149.0
	1969	44	8.6	0.1	8.7	9.9	115.3
	1970	66	12.8	2.0	14.8	32.2	451.1
	1971	46	14.1	0.5	14.7	20.6	317.3
	1972	48	11.7	3.5	15.2	19.2	305.1
Northern Territory	1968	37	3.7	..	3.7	4.6	50.2
	1969	33	8.0	0.2	8.2	8.7	124.8
	1970	62	11.6	*	11.6	27.0	424.4
	1971	41	9.5	0.1	9.6	15.7	271.4
	1972	32	3.4	*	3.5	15.1	267.1
Australian Capital Territory	1968	10	2.3	..	2.3	3.0	33.7
	1969	8	9.8	*	9.8	9.4	100.6
	1970	20	5.1	*	5.1	16.8	198.2
	1971	11	6.3	..	6.3	3.3	47.4
	1972	9	6.2	*	6.2	23.1	380.4
Australia	1968	1,713	700.8	19.5	720.3	1,079.5	12,115.2
	1969	2,014	1,244.0	41.2	1,285.2	1,958.0	22,985.7
	1970	2,738	1,304.2	63.3	1,367.4	2,393.7	30,883.3
	1971	2,404	1,267.7	58.8	1,326.5	3,068.6	45,241.3
	1972	2,298	1,041.2	72.6	1,113.8	2,010.3	32,074.4

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. (b) Persons thrown out of work at the establishments where the stoppage occurred but not themselves parties to the dispute.

\* Less than 50.

## Duration of disputes

The duration of each industrial dispute involving a loss of work, i.e. the time between the cessation and resumption of work, has been calculated in working days, exclusive of Saturdays, Sundays and holidays, except where the establishment involved carries on a continuous process (e.g. metal smelting and cement manufacture).

The following table shows, for the year 1972, industrial disputes in coal mining, engineering, etc., stevedoring and other industries classified according to duration.

## INDUSTRIAL DISPUTES(a): DURATION, BY INDUSTRY GROUP, AUSTRALIA, 1972

Duration (working days)	Number	Workers involved(b)		Working days lost		Estimated loss in wages (\$'000)
		Number ( <sup>'000</sup> )	Proportion of total (per cent)	Number ( <sup>'000</sup> )	Proportion of total (per cent)	
COAL MINING						
Up to 1 day . . . . .	75	11.9	35.5	13.3	21.8	218.2
Over 1 to 2 days . . . . .	42	15.4	45.8	24.3	39.9	380.1
Over 2 to 3 days . . . . .	13	3.8	11.3	9.4	15.5	175.2
Over 3 to less than 5 days . . . . .	15	1.4	4.2	5.2	8.6	98.4
5 to less than 10 days . . . . .	4	1.0	3.1	6.0	9.8	119.3
10 to less than 20 days . . . . .	..	..	..	..	..	..
20 to less than 40 days . . . . .	..	..	..	..	..	..
40 days and over . . . . .	2	0.1	0.2	2.3	4.4	35.2
Total . . . . .	151	33.6	100.0	60.8	100.0	1,026.5
ENGINEERING, METALS, VEHICLES, ETC.						
Up to 1 day . . . . .	381	340.1	67.3	205.1	33.1	3,274.4
Over 1 to 2 days . . . . .	124	121.0	23.9	150.0	24.2	2,374.4
Over 2 to 3 days . . . . .	74	11.2	2.2	27.3	4.4	422.6
Over 3 to less than 5 days . . . . .	64	11.1	2.2	43.5	7.0	680.5
5 to less than 10 days . . . . .	92	10.3	2.0	73.2	11.8	1,122.9
10 to less than 20 days . . . . .	41	7.6	1.5	98.4	15.9	1,589.3
20 to less than 40 days . . . . .	11	4.0	0.8	22.7	3.7	311.6
40 days and over . . . . .	..	..	..	..	..	..
Total . . . . .	787	505.4	100.0	620.2	100.0	9,775.8
STEVEDORING						
Up to 1 day . . . . .	176	44.2	83.6	22.9	58.5	330.5
Over 1 to 2 days . . . . .	37	3.8	7.2	5.0	12.7	72.4
Over 2 to 3 days . . . . .	11	2.1	4.0	4.4	11.2	62.2
Over 3 to less than 5 days . . . . .	8	2.5	4.7	5.5	14.0	76.5
5 to less than 10 days . . . . .	3	0.2	0.2	1.4	3.5	19.5
10 to less than 20 days . . . . .	..	..	..	..	..	..
20 to less than 40 days . . . . .	..	..	..	..	..	..
40 days and over . . . . .	..	..	..	..	..	..
Total . . . . .	235	52.9	100.0	39.2	100.0	561.1
OTHER INDUSTRIES						
Up to 1 day . . . . .	420	267.6	51.2	196.6	15.2	2,995.5
Over 1 to 2 days . . . . .	185	108.6	20.8	154.9	12.0	2,377.8
Over 2 to 3 days . . . . .	148	43.7	8.4	117.7	9.1	1,757.5
Over 3 to less than 5 days . . . . .	147	37.0	7.1	146.9	11.4	2,433.0
5 to less than 10 days . . . . .	135	31.6	6.1	219.8	17.0	3,544.0
10 to less than 20 days . . . . .	64	24.8	4.8	230.5	17.9	3,352.9
20 to less than 40 days . . . . .	23	8.5	1.6	219.4	17.0	4,177.4
40 days and over . . . . .	3	0.1	..	4.3	0.3	73.0
Total . . . . .	1,125	521.9	100.0	1,290.0	100.0	20,711.0
ALL INDUSTRIES						
Up to 1 day . . . . .	1,052	663.9	59.6	437.9	21.8	6,818.6
Over 1 to 2 days . . . . .	388	248.8	22.3	334.1	16.6	5,204.8
Over 2 to 3 days . . . . .	246	60.9	5.5	158.9	7.9	2,417.5
Over 3 to less than 5 days . . . . .	234	51.9	4.7	201.1	10.0	3,288.3
5 to less than 10 days . . . . .	234	43.2	3.9	300.3	14.9	4,805.8
10 to less than 20 days . . . . .	105	32.4	2.9	328.9	16.3	4,942.2
20 to less than 40 days . . . . .	34	12.6	1.1	242.1	12.0	4,489.0
40 days and over . . . . .	5	0.2	..	6.9	0.3	108.2
Grand Total . . . . .	2,298	1,113.8	100.0	2,010.3	100.0	32,074.4

(a) Refers only to disputes involving a stoppage of work of ten man-days or more involved. See footnote (b) to table on page 273.

(b) Includes workers indirectly



## Causes of disputes

In the following table causes of industrial disputes (that is, the direct *causes of stoppages of work*) are analysed in four industry groups and grouped under the following headings.

*Wages*—claims involving general principles relating to wages, including combined claims relating to wages, hours or conditions of work. *Hours of work*—claims involving general principles relating to hours of work. *Leave, pensions, compensation provisions, etc.*—claims involving general principles relating to these provisions. *Managerial policy*—disputes concerning managerial policy of employers including computation of wages, hours, leave, etc. in individual cases; docking pay, etc.; dismissals, etc.; principles of promotion, etc.; employment of particular persons and personal disagreements; production limitations, etc. *Physical working conditions*—disputes concerning physical working conditions including safety issues; protective clothing and equipment, etc.; amenities; shortage of, or condition of, equipment or material; new production methods, etc.; arduous physical tasks, etc. *Trade unionism*—disputes concerning employment of non-unionists; inter-union and intra-union disputes; sympathy stoppages; recognition of union activities, etc. *Other*—disputes concerning protests directed against persons or situations other than those dealing with employer-employee relationship; non-award public holidays; accidents and funerals; no reason given for stoppage, etc.

For more information concerning these classifications of causes see the quarterly bulletin *Industrial Disputes* (6.6.).

## INDUSTRIAL DISPUTES(a): CAUSES, INDUSTRY GROUPS, AUSTRALIA, 1972

Cause of dispute	Engineering, metals, vehicles, etc.				
	Coal mining	Steve- doring	Other industries	All industries	
Number of disputes—					
Wages . . . . .	21	303	9	548	881
Hours of work . . . . .	1	3	2	10	16
Leave, pensions and compensation provisions, etc. . . . .	2	11	..	11	24
Managerial policy . . . . .	49	257	84	346	736
Physical working conditions . . . . .	30	74	67	104	275
Trade unionism . . . . .	23	102	24	72	221
Other . . . . .	25	37	49	34	145
Total disputes . . . . .	151	787	235	1,125	2,298
Workers involved(b) ('000)—					
Wages . . . . .	3.1	295.5	0.6	347.4	646.5
Hours of work . . . . .	*	0.1	0.1	2.4	2.6
Leave, pensions and compensation provisions, etc. . . . .	0.1	4.3	..	17.3	21.8
Managerial policy . . . . .	5.9	51.3	12.2	78.0	147.4
Physical working conditions . . . . .	7.3	9.1	8.3	25.3	50.0
Trade unionism . . . . .	10.2	17.0	1.5	12.9	41.7
Other . . . . .	6.9	128.1	30.2	38.7	203.9
Total workers involved . . . . .	33.6	505.4	52.9	521.9	1,113.8
Working days lost ('000)—					
Wages . . . . .	9.7	380.9	0.5	967.5	1,358.5
Hours of work . . . . .	*	0.1	0.3	2.1	2.5
Leave, pensions and compensation provisions, etc. . . . .	0.1	2.6	..	42.9	45.6
Managerial policy . . . . .	10.7	102.3	11.0	177.8	301.8
Physical working conditions . . . . .	9.8	17.8	8.1	41.0	76.7
Trade unionism . . . . .	19.9	25.6	1.7	30.2	77.4
Other . . . . .	10.6	90.9	17.8	28.5	147.7
Total working days lost . . . . .	60.8	620.2	39.2	1,290.0	2,010.3

(a) Refers only to disputes involving a stoppage of work of ten<sup>2</sup> man-days or more. involved. See footnote (b) to table on page 273.

(b) Includes workers indirectly

\* Less than 50.

## Methods of settlement of disputes

The following table shows particulars of industrial disputes for 1972, classified according to method of settlement, in four industry groups. These statistics relate to the method directly responsible for ending the stoppage of work. For more information concerning this classification of methods of settlement see the quarterly bulletin, *Industrial Disputes* (6.6).

**INDUSTRIAL DISPUTES(a): METHODS OF SETTLEMENT, INDUSTRY GROUPS  
AUSTRALIA, 1972**

<i>Method of settlement</i>	<i>Coal mining</i>	<i>Engi- neering, metals, vehicles, etc.</i>	<i>Steve- doring</i>	<i>Other industries</i>	<i>All industries</i>
NUMBER OF DISPUTES					
Private negotiation . . . . .	33	181	29	278	521
Mediation not based on legislation . . . . .	1	6	..	20	27
State legislation—					
Under State conciliation, etc. legislation . . . . .	13	48	..	166	227
Reference to State Government officials . . . . .	..	..	..	..	..
Commonwealth and Commonwealth-State legislation—					
Industrial Tribunals under—					
Conciliation and Arbitration Act . . . . .	9	63	..	103	175
Coal Industry Acts . . . . .	..	..	..	..	..
Stevedoring Industry Act . . . . .	..	..	1	..	1
Other Acts . . . . .	..	..	..	..	..
Reference to Commonwealth Government officials . . . . .	..	..	..	..	..
Filling places of workers on strike or locked out . . . . .	..	..	..	..	..
Closing down establishment permanently . . . . .	..	..	..	..	..
Resumption without negotiation . . . . .	95	489	205	558	1,347
Other methods . . . . .	..	..	..	..	..
<b>Total . . . . .</b>	<b>151</b>	<b>787</b>	<b>235</b>	<b>1,125</b>	<b>2,298</b>
WORKERS INVOLVED(b) ('000)					
Private negotiation . . . . .	5.1	26.7	3.9	76.1	111.9
Mediation not based on legislation . . . . .	0.4	0.3	..	3.5	4.3
State legislation—					
Under State conciliation, etc. legislation . . . . .	1.6	7.9	..	57.2	66.7
Reference to State Government officials . . . . .	..	..	..	..	..
Commonwealth and Commonwealth-State legislation—					
Industrial Tribunals under—					
Conciliation and Arbitration Act . . . . .	1.0	12.3	..	26.3	39.6
Coal Industry Acts . . . . .	..	..	..	..	..
Stevedoring Industry Act . . . . .	..	..	0.1	..	0.1
Other Acts . . . . .	..	..	..	..	..
Reference to Commonwealth Government officials . . . . .	..	..	..	..	..
Filling places of workers on strike or locked out . . . . .	..	..	..	..	..
Closing down establishment permanently . . . . .	..	..	..	..	..
Resumption without negotiation . . . . .	24.5	458.2	48.9	358.8	891.3
Other methods . . . . .	..	..	..	..	..
<b>Total . . . . .</b>	<b>33.6</b>	<b>505.4</b>	<b>52.9</b>	<b>521.9</b>	<b>1,113.8</b>

For footnotes see next page.

INDUSTRIAL DISPUTES(a): METHODS OF SETTLEMENT, INDUSTRY GROUPS  
AUSTRALIA, 1972—continued

<i>Method of settlement</i>	<i>Coal mining</i>	<i>Engineer- ing, metals, vehicles, etc.</i>	<i>Steve- doring</i>	<i>Other industries</i>	<i>All industries</i>
WORKING DAYS LOST ('000)					
Private negotiation . . . . .	11.7	86.6	6.6	325.9	430.7
Mediation not based on legislation . . . . .	0.4	2.8	..	12.1	15.3
State legislation—					
Under State conciliation, etc. legislation . . . . .	5.4	43.4	..	190.3	239.0
Reference to State Government officials . . . . .	..	..	..	..	..
Commonwealth and Commonwealth-State legislation—					
Industrial Tribunals under—					
Conciliation and Arbitration Act . . . . .	2.5	79.5	..	147.9	229.8
Coal Industry Acts . . . . .	..	..	..	..	..
Stevedoring Industry Act . . . . .	..	..	0.1	..	0.1
Other Acts . . . . .	..	..	..	..	..
Reference to Commonwealth Government officials . . . . .	..	..	..	..	..
Filling places of workers on strike or locked out . . . . .	..	..	..	..	..
Closing down establishment permanently . . . . .	..	..	..	..	..
Resumption without negotiation . . . . .	40.9	408.0	32.6	613.9	1,095.3
Other methods . . . . .	..	..	..	..	..
Total . . . . .	60.8	620.2	39.2	1,290.0	2,010.3

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. (b) Includes workers indirectly involved. See footnote (b) to table on page 273.

## WORKERS' COMPENSATION LEGISLATION

A conspectus of the principal provisions of Workers' Compensation Acts and Ordinances in force in Australia at 31 December 1971 is included in *Labour Report* No. 56, 1971, pages 295–307.

## LABOUR ORGANISATIONS

### Labour organisations in Australia

The figures shown in this section are prepared from a special collection of membership of labour organisations at 31 December each year. The affairs of single unions are not disclosed in the published results and this has assisted in securing complete information. The Bureau is indebted to the secretaries of trade unions for their co-operation in supplying information. More detailed statistics appear in the annual *Labour Report*. Current figures are published in an annual bulletin, *Trade Union Statistics: Australia* (6.24).

#### Trade unions

For the purpose of these statistics a trade union is defined as an organisation consisting predominantly of employees and whose principal activities include the negotiation of rates of pay and conditions of employment for its members.

The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organisation, which, in its turn, may be a branch of an international body. Broadly speaking, there are four distinct classes of labour organisations: (a) the local independent, (b) the State, (c) the interstate, and (d) the Australasian or international; but a number of variations occur from each of these classes. The schemes of organisation of interstate or federated unions vary greatly in character. In some unions the State organisations are bound together under a system of unification with centralised control, while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes. Statistics relating to interstate or federated trade unions are shown in a table on page 279.

Returns showing membership by States and Territories at 31 December each year are obtained for all trade unions and employee organisations. The following table shows the position at the end of each of the years 1970 to 1972.



**TRADE UNIONS: NUMBER AND MEMBERSHIP, STATES AND TERRITORIES  
DECEMBER 1970 TO 1972**

State or Territory	Number of separate unions			Number of members ('000)			Percentage increase in membership(a)		
	1970	1971	1972	1970	1971	1972	1970	1971	1972
New South Wales . . . .	208	204	198	912.3	971.6	988.4	3.1	6.5	1.7
Victoria . . . . .	156	158	158	591.5	617.7	652.1	5.7	4.4	5.6
Queensland . . . . .	139	140	138	330.2	337.6	343.5	-1.8	2.2	1.7
South Australia . . . .	137	139	132	202.7	215.9	223.7	4.4	6.5	3.6
Western Australia . . .	155	154	151	168.6	178.3	184.8	4.0	5.7	3.6
Tasmania . . . . .	114	111	112	73.9	75.2	80.5	5.8	1.8	7.1
Northern Territory(b) .	45	51	55	6.6	8.1	11.1	(b)	(b)	(b)
Australian Capital Territory(b)	82	82	84	28.8	32.2	39.7	(b)	(b)	(b)
<b>Australia . . . . .</b>	<b>(c)305</b>	<b>(c)303</b>	<b>(c)305</b>	<b>2,314.6</b>	<b>2,436.6</b>	<b>2,523.7</b>	<b>3.4</b>	<b>5.3</b>	<b>3.6</b>

(a) On preceding year. (b) Some unions in the Territories are affiliated with State organisations and their membership is reported under the heading of that State. More accurate reporting of membership by location by trade unions over the years is reflected in the annual figures for the Territories and this affects their comparability over time. (c) Without interstate duplication—see below.

Minus sign (—) denotes decrease.

In the preceding table, under the heading 'Number of separate unions', a union reporting members in a State or Territory is counted as one union within that State or Territory. The figures do not add to the Australian total (shown in the last line) because a union represented in more than one State or Territory is included in the figure for each State or Territory in which it is represented, but is counted only once in the Australian total.

A table showing the number and membership of trade unions in Australia for each year since 1912 is included in the Appendix to *Labour Report* No. 56, 1971.

Information about the industry distribution of trade unions and their membership has been published in the Year Book in past years in the form of a table classifying trade unions and their members by industry groups. In cases where the members of a union were employed in a number of industries the union has been classified to the predominant industry for the union concerned. In recent years a number of trade unions have ceased to function individually by reason of amalgamation or merger. This has created problems of coding where the amalgamating unions have been classified to different industry groups. These amalgamations, etc., together with the imprecision of coding unions to their predominant industry group, result in an inaccurate analysis of the number and membership of trade unions by industry groups. Therefore the publication of the table showing industry groups has been discontinued.

*Number of trade union members and proportion of wage and salary earners.* The following table shows the approximate percentages of wage and salary earners in employment who are members of trade unions. The estimates of total wage and salary earners have been obtained by adding the number of employees in agriculture and in private domestic service recorded at the June 1966 population census to the estimates of employees in all other industries at the end of each year. For this reason, and also because the membership of trade unions includes some persons not in employment, the percentages shown in the table are approximations. The percentages shown in this table are not directly comparable with those shown in Year Book No. 55, 1969 and earlier issues because the present estimates are based on a new series of employment estimates as from June 1966 see Chapter 20, Employment and Unemployment. The difference is of most significance for female employees as the current employment estimates include a considerable number of part-time employees who had previously been excluded.

**TRADE UNIONS: NUMBER OF MEMBERS AND PROPORTION OF TOTAL WAGE AND  
SALARY EARNERS, AUSTRALIA(a), 1968 TO 1972**

End of December—	Number of members ('000)			Proportion of total wage and salary earners(a) (Per cent)		
	Males	Females	Persons	Males	Females	Persons
1968 . . . . .	1,691.1	499.5	2,190.7	59	36	51
1969 . . . . .	1,717.5	521.6	2,239.1	58	36	50
1970 . . . . .	1,750.6	564.1	2,314.6	57	36	50
1971 . . . . .	1,818.2	618.3	2,436.6	59	39	52
1972 . . . . .	1,827.4	696.2	2,523.7	58	43	53

(a) See text above.

*Interstate or federated trade unions.* The following table gives particulars of the number and membership of interstate or federated trade unions in 1972.

**INTERSTATE OR FEDERATED TRADE UNIONS(a): AUSTRALIA, DECEMBER 1972**

	Unions operating in—					Total
	2 States	3 States	4 States	5 States	6 States	
Number of unions . . . . .	10	5	17	29	79	140
Number of members ('000) . . . . .	22.0	62.4	96.7	339.0	1,803.0	2,323.1

(a) Certain unions in this group have, in addition to branches in the States, branches in the Northern Territory or the Australian Capital Territory or both.

**Employer and employee organisations registered under Industrial Arbitration Acts, etc.**

The Commonwealth *Conciliation and Arbitration Act* 1904–1972 and a number of State industrial arbitration acts provide for the registration of employer and employee organisations as outlined below. For further details see the annual *Labour Report*. In general, registration is necessary before an organisation may appear before the relevant industrial arbitration tribunal.

In Victoria and Tasmania where wages and conditions of work in the State sphere are determined by Wages Boards there is no provision in industrial arbitration legislation for registration of trade unions or employer organisations.

*Commonwealth.* At the end of 1972 the number of employers' organisations registered under the provisions of the *Conciliation and Arbitration Act* 1904–1972 was 77. The number of unions registered at the end of 1972 was 152, with membership of 2,129,097, representing 84 per cent of the total membership of all trade unions in Australia. Lists of organisations of employees and employers registered under this Act are contained in the *Industrial Information Bulletin*, Vol. 28 No. 1, January 1973 published by the Department of Labour.

*New South Wales.* At 30 June 1972 there were 130 employee unions and 286 employer unions registered under provisions of the Industrial Arbitration Act, 1940–1969, and 146 employee unions, 17 employer unions, and 1 other union registered under the Trade Union Act, 1881–1965. Lists of unions registered under these Acts are included in the *New South Wales Industrial Gazette* (see Vol. 186 Part 1 for details as at 30 June 1972).

*Queensland.* At 31 December 1972 there were 79 employee unions registered under the *Industrial Conciliation and Arbitration Acts*, 1961 to 1964, with a reported membership of 299,223. At the same date 40 employer unions with a reported membership of 39,761 employers were registered. Lists of registered employee and employer unions are published in the annual report of the President of the Industrial Court.

*South Australia.* At the end of December 1972 there were 2 employer associations and 52 employee associations registered under the provisions of the Industrial Conciliation and Arbitration Act 1972. Membership of these employee associations totalled 140,408.

*Western Australia.* At 30 June 1972 there were 94 unions of workers, with an aggregate membership of 152,812, registered under the provisions of the *Industrial Arbitration Act*, 1912–1971. At the same date there were 13 registered unions of employers with a reported aggregate membership of 1,908 employers. Lists of registered unions of workers and of employers together with membership figures are published in the *Western Australian Industrial Gazette* (see Vol. 52, pages 160–62, Appendix XIX).

**Central labour organisations**

*Trades and Labour Councils.* Delegate organisations, usually known as Trades Hall Councils or Labour Councils and consisting of representatives of a number of trade unions, have been established in the capital cities and in a number of other centres in each State. In the centres where these councils exist most unions or local branches operating in the district are affiliated. The district councils obtain their finance by means of a *per capita* tax on members of affiliated unions.

The following table shows, for each State and Territory, the number of trades and labour councils and the number of affiliated unions or branches of unions at the end of 1972. The figures for the number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated with the local trades councils in the several towns in which they are represented.

**CENTRAL LABOUR ORGANISATIONS: NUMBER, AND UNIONS AND BRANCH UNIONS  
AFFILIATED, STATES AND TERRITORIES, DECEMBER 1972**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
Number of councils	11	8	13	7	3	2	..	1	45
Number of unions and branch unions affiliated	360	270	205	176	121	100	..	27	1,259

As well as trades and labour councils there are councils organised on trade lines and composed of delegates from separate unions whose members' interests are closely connected by reason of their occupations. Delegate councils of unions connected directly or indirectly with the metal trades, or with the building trades, are examples of such organisations.

*Australian Council of Trade Unions.* A central labour organisation, now called the Australian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the trade unions of Australia, and was founded at an All-Australian Trade Union Congress held in Melbourne in May 1927. The A.C.T.U. consists of affiliated unions and approved State Trades and Labour Councils and Provincial Councils. The State Trades and Labour Council in each State is the State Branch of the A.C.T.U. and it has the right to appoint one representative to act on the executive of the Council. In addition to the four A.C.T.U. officers and representatives of the State Branches of the A.C.T.U., seven delegates are elected by and from Congress, one from each, of the following industry groups: Building, Food and distributing services, Manufacturing, Metal Services, Transport, and the A.W.U. group. The President and Secretary are full-time officials and, with the two Vice-Presidents, are elected by and from the Australian Congress of Trade Unions. The ordinary meetings of Congress are held in alternate years. The 1971 Biennial Congress was held in August-September 1971. Special meetings of Congress are held whenever deemed advisable by decision of the executive, as approved by the majority of its branches, or by resolution supported by unions representing one-third of the total membership of the A.C.T.U.

For further particulars see the annual *Labour Report*.

*Other.* In addition to the A.C.T.U., other central labour organisations exist. These include the *Australian Council of Salaried and Professional Associations*, the *Council of Commonwealth Public Service Organisations*, and the *Council of Professional Associations*. Details of these councils will be found in *Labour Report* No. 56, 1971, pages 316-17.

### International Labour Organisation

The International Labour Organisation (I.L.O.) was established on 11 April 1919, as an autonomous institution associated with the League of Nations. Its original constitution was adopted as Part XIII of the Treaty of Versailles. With certain amendments this constitution remains the charter of I.L.O. to this day, bringing governments, employers and trade unions together to discuss international labour and social problems. A new definition of the aims and purposes of the I.L.O., known as the Declaration of Philadelphia, was added to the constitution at the 1944 Session of the International Labour Conference and this asserted the responsibility of I.L.O. in combating poverty and insecurity. In 1946 the Organisation became the first of the specialised agencies of the United Nations. Under the terms of agreement, the United Nations recognises the I.L.O. as a specialised agency having responsibility in the field defined by its constitution, which embraces labour conditions, industrial relations, employment organisation, social security and other aspects of social policy.

The Organisation has three basic parts. These are the International Labour Conference, its highest authority, which usually meets annually; the Governing Body its executive council, which usually meets three times each year; and the International Labour Office, which provides the Secretariat of the Organisation. The Conference is composed of delegations from the member States of the Organisation. At the end of 1972 there were 121 member States, each of which is entitled to be represented by four delegates—two representing the government, one representing employers and one representing workers, together with their advisers. Each delegate speaks and votes independently, so that all points of view in each country are fully expressed. The Governing Body consists of the representatives of twenty-four governments, and twelve employers' and twelve workers' representatives. Particulars are given in *Labour Report* No. 56, 1971 of the proceedings of International Labour Conferences up to the 56th Session, held in Geneva in June 1971. For details of I.L.O. conventions ratified by Australia, see *Labour Report* No. 56, 1971, pages 320-1.



## CHAPTER 11

# OVERSEAS TRANSACTIONS

This chapter includes statistics of overseas trade, balance of payments, and overseas investment by private investors, but because of limitations of space the statistics are, in the main, restricted to summarised form. For detailed information see the *Annual Bulletin of Overseas Investment, Australia* (5.20); and the other annual bulletins *Overseas Trade* (preliminary (8.15) (8.16) and final (8.11) ), *Australian Exports, Country by Commodity* (8.4), *Australian Imports, Country by Commodity* (8.19), *Imports Cleared for Home Consumption* (issued in two parts) (8.7) and the half-yearly bulletin *Balance of Payments* (8.1) Preliminary information is available in summary form in the statements *Balance of Payments—Quarterly Summary* (8.2), *Overseas Investment—Preliminary Bulletin* (annual) (5.21), *Australian Overseas Trade—Exports and Imports* (8.12) (monthly), *Overseas Trade—Exports by Commodity Divisions* (monthly) (8.18), and *Overseas Trade—Imports by Commodity Divisions* (monthly) (8.13). Current information is included in the *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5), and in more detail in the *Monthly Bulletin of Overseas Trade Statistics* (8.9) (8.10). There are also the following additional mimeographed statements: *Exports of Principal Products of Australian Origin* (monthly) (8.5), *Imports of Assembled New Motor Cars* (monthly) (8.8), *Overseas Trade with Major Groups of Countries* (quarterly) (8.14), *Highlights of Overseas Trade* (quarterly) (8.23), *Exports by Mode of Transport* (quarterly) (8.25), *Exports and Imports by Commodity Division and Preliminary Estimates* (annually) (8.24), and *Trade of Australia with Eastern Countries* (annually) (8.17). Additional unpublished details of exports and imports can be supplied on request.

A subscription service is available from this Bureau to provide for the detailed requirements of individual users of overseas trade statistics. These special periodical returns are obtainable monthly or quarterly and show trade according to items of the Australian Export and Import Commodity Classifications or statistical key code dissections of Australian Customs Tariff items. A nominal charge is made which varies depending on the amount of detail required.

## OVERSEAS TRADE

### Constitutional provisions and legislation

#### Constitutional provisions

By the Commonwealth of Australia Constitution Act, Section 51 (1), the power to make laws with respect to trade and commerce with other countries was conferred on the Commonwealth Parliament. Under Section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Executive Government of the Commonwealth on 1 January 1901. Other references to trade and commerce are contained in Sections 87 to 95 of the Constitution (see pages 17–18).

#### Commonwealth legislation

Commonwealth legislation affecting overseas trade includes: the Customs Act, the Customs Tariff and the Customs Tariff (Dumping and Subsidies) Act. The Customs Act is the administrative Act under which the Department of Customs and Excise operates. The Customs Tariff provides the statutory authority for imposing the actual rates of duty operative from time to time, while the Customs Tariff (Dumping and Subsidies) Act provides protection for Australian industry against various forms of unfair trading.

#### The Customs Tariff

The first Commonwealth Customs Tariff was introduced by Resolution on 8 October 1901, from which date uniform duties came into effect throughout Australia. The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to certain imports from countries of the Commonwealth and certain developing countries. Duties are imposed on some goods, generally of a luxury nature, for revenue purposes. Customs collections are a major source of revenue but in its protective character the tariff has an important influence on the Australian economy.

The present tariff provides for general and preferential rates of duty, and its structure is based on the 'Brussels Nomenclature' which has its origins in the Convention on Nomenclature for the Classification of Goods in Customs Tariffs, signed in Brussels on 15 December 1950. Australia has operated a 'Brussels-type' tariff since 1 July 1965.

*Preferential rates.* Preferential rates apply to goods the produce or manufacture of the United Kingdom, Ireland, Canada, New Zealand, and Papua New Guinea, and certain goods the produce or manufacture of specified countries, provided that such goods comply with the laws in force at the time affecting the grant of preference. With the termination on 1 February 1973 of the United Kingdom-Australia Trade Agreement existing preferential rates applicable to United Kingdom goods are under review.

The following are the rules of origin for preference purposes as defined in the Customs Act.

151.—(1.) For the purposes of this Act and the *Customs Tariff* 1966–1972 (other than section twenty of the last-mentioned Act), goods shall be treated as the produce of a country if they are unmanufactured raw products of the country.

(2.) For the purposes of this Act and the *Customs Tariff* 1966–1972 (other than section twenty or a direction under section thirty-three "c" of the last-mentioned Act), goods shall be treated as the manufacture of a country—

(a) if the goods were wholly manufactured in the country from materials of one or more of the following classes:

(i) unmanufactured raw products;

(ii) materials wholly manufactured in the country or in Australia, or in the country and in Australia; and

(iii) imported materials that the Minister has, in relation to the country, determined, by notice published in the *Gazette*, to be manufactured raw materials; or

(b) if the goods were partly manufactured in the country, the process last performed in the manufacture of the goods was performed in the country and—

(i) not less than three-quarters, or, in a case where the country is New Zealand, one-half, of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of the country or of the country and Australia;

(ii) in a case where the goods are goods of a class or kind not commercially manufactured in Australia, not less than one-quarter of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of the country or of the country and Australia; or

(iii) in a case where the country is New Zealand, not less than three-quarters of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of New Zealand and the United Kingdom or of New Zealand, Australia and the United Kingdom.

(3.) For the purposes of a direction under section thirty-three "c" of the *Customs Tariff* 1966–1972 goods shall be treated as the manufacture of a country if—

(a) the process last performed in the manufacture of the goods was performed in the country; and

(b) not less than one-half of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of the country or of the country and one or more of the following countries, that is to say, Australia and countries that, at the time the goods are entered for home consumption, are less developed countries, other than a country that, by virtue of a direction under sub-section (2) of section eleven of the *Customs Tariff* 1966–1972 is not to be treated as a less developed country in relation to the class of goods in which the goods are included.

151A.—(1.) For the purposes of this Act and the *Customs Tariff* 1966–1972 (other than section twenty or a direction under section thirty-three "c" of the last-mentioned Act), goods shall not be treated as the produce or manufacture of the United Kingdom, Canada, New Zealand, Ireland, Malawi, Rhodesia, Zambia, the Territory of Papua or the Territory of New Guinea unless they have been shipped from that country to Australia and, except where the Collector is satisfied that the intended destination of the goods when originally shipped from that country was Australia, have not been transhipped.

(2.) The last preceding sub-section does not apply—

(a) to goods the produce or manufacture of a country other than New Zealand that are imported into Australia from New Zealand; or

(b) to goods the produce or manufacture of a country other than the Territory of Papua or the Territory of New Guinea that are imported into Australia from the Territory of Papua or the Territory of New Guinea.

(3.) For the purposes of a direction under section thirty-three "c" of the *Customs Tariff* 1966-1972, goods shall not be treated as the produce or manufacture of a country unless they have been shipped from that country to Australia and, except where the Collector is satisfied that the intended destination of the goods when originally shipped from that country was Australia, have not been transhipped.

(4.) For the purposes of this section—

(a) goods may be treated as having been shipped from the Territory of Papua or the Territory of New Guinea if they have been shipped from either of those territories; and

(b) goods may be treated as having been shipped from Malawi, Rhodesia or Zambia if they have been shipped from any of those countries or from Lourenco Marques or Beira in Mozambique.

*Declared preference countries, Customs Tariff.* 10.—(1.) The Minister may, by order published in the *Gazette*, declare that a country specified in the order is a declared preference country for the purposes of this Act.

(2.) An order under the last preceding sub-section has effect, or shall be deemed to have had effect, from and including such date (which may be a date earlier than the date of publication of the order in the *Gazette*) as is specified in the order.

(3.) The Minister may, by order, published in the *Gazette*, revoke an order under sub-section (1.) of this section.

(4.) An order under the last preceding sub-section has effect from and including such date (which shall not be a date earlier than the date of publication of the order in the *Gazette*) as is specified in the order.

(5.) Goods shall not be treated as the produce or manufacture of a declared preference country for the purposes of this Act unless, at the time the goods are entered for home consumption, the order under sub-section (1.) of this section in which the declared preference country is specified has effect or is deemed to have had effect.

Declared preference countries comprise:

Bahamas	Gambia, The	Nigeria, Federation of
Barbados	Ghana	St. Helena
Bermuda	Gibraltar	Seychelles
British Honduras	Gilbert and Ellice Islands	Sierra Leone
British Indian Ocean Territory	Colony	Singapore, Republic of
British Solomon Islands Protectorate	Guyana, Republic of	Sri Lanka, Republic of (formerly Ceylon)
British Virgin Islands	Hong Kong	Tanzania
Brunei	Jamaica	Tonga
Cyprus	Kenya	Trinidad and Tobago
Falkland Islands and Dependencies	Leeward Islands	Uganda
Fiji	Malaysia	Windward Islands
	Maldives Islands	
	Malta	
	Mauritius and Dependencies	

*Lesser developed countries, Customs Tariff.* 11.—(1.) The Minister may, by order published in the *Gazette*, declare that a country specified in the order is a less developed country for the purposes of this Act.

(2.) The Minister may, in an order under the last preceding sub-section, direct that a country that is a less developed country by virtue of the order shall not be treated as a less developed country in relation to a class of goods specified in the direction.

(3.) An order under sub-section (1.) of this section has effect, or shall be deemed to have had effect, from and including such date (which may be a date earlier than the date of publication of the order in the *Gazette*) as is specified in the order.

(4.) The Minister may, by order published in the *Gazette*, revoke an order under sub-section (1.) of this section.

(5.) An order under the last preceding sub-section has effect from and including such date (which shall not be a date earlier than the date of publication of the order in the *Gazette*) as is specified in the order.



Lesser developed countries comprise:

Afghanistan	Guyana, Republic of	Republic of Viet-Nam
Algeria	Haiti	Romania
Antigua	Honduras	Rwanda
Arab Republic of Egypt	India	St Helena
Argentina	Indonesia	St Christopher-Nevis- Anguilla
Bahamas	Iran	St Lucia
Bahrain	Iraq	St Vincent
Bangladesh	Israel	Saudi Arabia
Barbados	Ivory Coast	Senegal
Bermuda	Jamaica	Seychelles
Bolivia	Jordan	Sierra Leone
Botswana	Kenya	Singapore, Republic of
Brazil	Khmer Republic, The	Somali Democratic Republic
British Honduras	Kuwait	Spain
British Solomon Islands Protectorate	Laos	Sri Lanka, Republic of (formerly Ceylon)
British Virgin Islands	Lebanon	Sudan
Brunei	Lesotho	Surinam
Burma	Liberia	Swaziland
Burundi	Libya	Syria
Cameroon	Malagasy Republic	Taiwan
Cayman Islands	Malawi	Tanzania, United Republic of
Central African Republic	Malaysia	Thailand
Chad	Maldives Islands	Trust Territory of New Guinea
Chile	Mali	Territory of Papua
Colombia	Malta	Togo
Congo (Brazzaville)	Mauritania	Tokelau Islands
Cook Islands (including Niue)	Mauritius and Dependencies	Tonga
Costa Rica	Mexico	Trinidad and Tobago
Cuba	Montserrat	Tunisia
Cyprus	Morocco	Turkey
Dahomey	Netherlands Antilles	Turks and Caicos Islands
Dominica	Nepal	Uganda
Dominican Republic	New Hebrides Condominium	Union of Arab Emirates (Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al Qaiwain, Fujairah).
Ecuador	Nicaragua	Upper Volta
El Salvador	Niger	Uruguay
Ethiopia	Nigeria, Federation of	Venezuela
Falkland Islands and Dependencies	Pakistan	Western Samoa
Fiji	Panama	Yemen
Gabon	Paraguay	Yugoslavia
Gambia, The	Peoples' Republic of South Yemen	Zaire, Republic of
Ghana	Peru	Zambia
Gibraltar	Philippines	
Gilbert and Ellice Islands Colony	Pitcairn Island	
Greece	Portuguese Overseas Provinces	
Grenada	Qatar	
Guatemala	Ras Al Khaimah	
Guinea	Republic of Korea	

*General rates.* General rates apply to goods from all countries which do not qualify for preferential rates of duty under a particular tariff classification.

*By-law provisions.* Customs By-laws and Ministerial Determinations are instruments made by the Minister for Customs and Excise under the authority of sections 271 to 273D of the Customs Act by which goods may be admitted free of duty or at rates of duty lower than those normally applicable. By-laws and determinations may only be made under a tariff provision containing the words 'as prescribed by by-law'. Such a provision sets out the by-law duty rates which will apply to goods only when such goods are included in a by-law or determination made under that provision. A prerequisite for by-law admission is that generally, suitably equivalent goods be not reasonably available from Australian production. A by-law covers goods by general description with no limit on quantity and may be used by any importer of the goods. A determination generally covers a

specific quantity of particular goods and may be used only by the importer mentioned in the determination.

*Primage duties.* In addition to the ordinary duties of customs imposed by the Customs Tariff, *ad valorem* primage duties at rates of five per cent or ten per cent are charged on some goods according to the types of goods and origin thereof. Other goods are exempt from primage duty. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji, Cocos (Keeling) Islands, Christmas Island and Papua New Guinea are exempt from primage duty.

*Anti-dumping duties.* The *Customs Tariff (Dumping and Subsidies) Act* 1961–1965 provides protection for Australian industry against various forms of unfair trading. Under this Act dumping duty may be imposed on goods that are sold to Australian importers at a price which is less than the normal value of the goods, where this causes or threatens not insubstantial injury to an Australian industry. ‘Normal value’ under the Act means:

- (a) fair market value in the country of export;
- (b) price in the country of export to a third country;
- (c) fair market value in a third country; or
- (d) cost of production, plus f.o.b. charges, plus selling costs and profit.

The amount of dumping duty is the difference between the normal value and f.o.b. export price.

Countervailing duty may be levied on goods in respect of which any subsidy, bounty, reduction or remission of freight, or other financial assistance has been, or is being, paid or granted directly or indirectly upon the production, manufacture, carriage or export of those goods. The amount of the countervailing duty in respect of any goods is a sum equal to the amount of the subsidy, bounty, reduction or remission of freight or other financial assistance.

### Import controls—Customs (Import Licensing) Regulations

A comprehensive system of import licensing was introduced in Australia at the beginning of the second World War under the authority of the Customs (Import Licensing) Regulations. Following the gradual relaxation of the restrictions from the end of the War, import licensing was reimposed on 8 March 1952 and continued in force until 18 October 1962. From that date restrictions were removed from all commodities with the exception of some goods retained under control or subsequently brought under control for reasons associated with the protection of Australian industry. The goods subject to import licensing control as at 1 January 1973 are broadly described as used, second-hand or disposal earthmoving and construction equipment and four-wheel drive vehicles. Further information on import controls is given in Year Book No. 51, page 492.

### Export controls and incentives

*Export restrictions.* Section 112 of the Customs Act provides that the Governor-General may, by regulation, prohibit the exportation of goods from Australia and that this power may be exercised by: (a) prohibiting the exportation of goods absolutely; (b) prohibiting the exportation of goods to a specified place; and (c) prohibiting the exportation of goods unless prescribed conditions or restrictions are complied with. Goods subject to this export control are listed in the Customs (Prohibited Exports) Regulations.

*Exchange control—Banking Act* 1959–1967. As an integral part of the framework of exchange control, a control over goods exported from Australia is maintained under the provisions of Part III of the Banking (Foreign Exchange) Regulations, to ensure that the full proceeds of such goods are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Reserve Bank of Australia. This action is complementary to that taken under other parts of the Banking (Foreign Exchange) Regulations and under Part IV of the Banking Act to control the movement out of Australia of capital in the form of securities, currency and gold.

Export licences are issued subject to terms and conditions specified in the Banking (Foreign Exchange) Regulations, and may be subject to such further terms and conditions as are determined, or may be free from terms and conditions. On the receipt in Australia by the Reserve Bank, or by a bank acting as agent for that Bank, of advice that the foreign currency has been paid to the Reserve Bank or to an agent of the Bank in payment for goods exported in accordance with a licence granted under the regulations, the Bank, or an agent of the Bank, pays the licensee, or such other person as is entitled to receive it, an amount in Australian currency equivalent to the foreign currency received. In addition to commercial transactions involving exports, movements of personal effects are also controlled. Persons leaving Australia for overseas are required to obtain licences to cover their bona fide baggage, personal effects and household effects in any individual case where the gold content thereof exceeds \$1,000, or where jewellery and other articles of high intrinsic worth either exceed \$10,000 in value or those goods have not been the personal property of the passenger for at least twelve months.

*Export incentives.* The Commonwealth Government provides financial concessions as incentives to export. A special income tax allowance for export market development expenditure is designed to encourage firms to incur promotion expenditure in advance of export sales and to assist exporters and potential exporters to expand sales in existing markets and to enter new overseas markets. The allowance is in the form of a special deduction additional to the ordinary taxation deduction allowable in respect of specified expenses. Grants based on pay-roll tax are made to employers whose export sales of goods or property rights have increased above their average annual level in a base period. The grant is available in the first place to firms who are producers for export; but a producer for export may pass on grants to another firm who has supplied components embodied in the final product or to an export merchant.

### Trade descriptions

*The Commerce (Trade Descriptions) Act 1905-1966* gives power to require the application of a proper trade description to certain prescribed goods imported into or exported from Australia. Goods which must bear a prescribed trade description upon importation into Australia are specified in the Commerce (Imports) Regulations. As regards exports from Australia, marking requirements are prescribed in regulations issued under the Act and relating to specified export commodities.

## Government authorities

### Tariff Board

The *Tariff Board Act 1921-1972* provides for the appointment of a Tariff Board consisting of eleven members. Of these, two must, and a maximum of five may, be members of the Commonwealth Public Service at the time of their appointment (or first appointments in the case of re-appointments). Members of the Board are appointed for terms of not less than one year and not more than five years. The purpose of the Tariff Board is to advise the Government on matters relating to the protection and encouragement of Australian industry.

The Prime Minister is required to refer to the Board for inquiry and report the following matters: the necessity for new, increased, or reduced duties; the necessity for granting bounties and the effect of existing bounties; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff or by the restriction of the importation of any goods by charging unnecessarily high prices for his goods or acting in restraint of trade. In addition, the Prime Minister may refer the following matters to the Tariff Board for inquiry and report: the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws on the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and other matters affecting the encouragement of primary and secondary industries in relation to the Tariff. The Minister of State for Customs and Excise may refer to the Tariff Board for inquiry and report the following matters: the classification of goods in the Customs Tariff or Excise Tariff and matters in connection with the interpretation of these Tariffs; the question of the value for duty of goods; whether goods not prescribed in departmental by-laws should be so prescribed; and any matters in respect of which action may be taken under the *Customs Tariff (Dumping and Subsidies) Act 1961-1965*.

Where a matter of the necessity for new or increased duties on any goods has been referred to the Board for inquiry and report, the Board may, in its report, recommend the restriction of the importation of those goods for such period as is specified in the report.

Inquiries conducted by the Board relating to a revision of the Tariff, a proposal for a bounty, a question under the Customs Tariff (Dumping and Subsidies) Act, or any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff or by the restriction of the importation of any goods, are held in public, and evidence in such inquiries is taken in public on oath, unless the Board accepts evidence as confidential or in the form of a written statement by a witness on oath. The Board is required to make available to the public the contents of any such written statement except any matter which it accepts as confidential.

### Special Advisory Authority

The Prime Minister may also request a Special Advisory Authority to inquire into cases where urgent action appears necessary to protect an Australian industry against import competition pending receipt and consideration of a full report by the Tariff Board. The Special Advisory Authority's report must be submitted to the Prime Minister within thirty days of the making of the request. Temporary protection recommended by a Special Advisory Authority may be imposed, but may only operate for a period of up to three months after the date of receipt of the final report by the Tariff Board on the goods concerned.



## Trade agreements

### Multilateral—General Agreement on Tariffs and Trade

The General Agreement on Tariffs and Trade (G.A.T.T.), which came into force on 1 January 1948, is a multilateral trade treaty designed to facilitate trading relations between participating countries by reducing tariff and other barriers to the free interchange of goods. The Agreement provides a framework within which negotiations can be held to reduce barriers to trade, and a structure for embodying the results of such negotiations in a legal instrument. Features of the Agreement are the schedules of tariff concessions participating countries have negotiated with each other, the application of most-favoured-nation tariff treatment among the participants, the avoidance of other trade discrimination, and a code of agreed commercial policy rules for international trading. Each participating country retains the right (a) to impose new or increased duties for protective purposes, except in respect of particular products where rates of duty have been bound against increase in negotiations under the Agreement; (b) by negotiation to modify or withdraw concessions formerly agreed; (c) to impose import restrictions to protect the balance of payments; (d) to take emergency action where any industry is endangered by reason of any obligation incurred under the Agreement.

There have been six main tariff negotiations under the provisions of the Agreement, and a number of smaller scale negotiations preceding the accession of individual countries. As a result the tariff rates for a great many items entering into world commerce have been reduced and/or bound against increase. Australia has obtained tariff concessions from individual countries on a number of its principal or potential exports to them, as a result both of direct negotiation by Australia and of negotiation by other countries. In the latter case the benefits occurred through the operation under the Agreement of the most-favoured-nation principle. The latest series of trade negotiations, the Kennedy Round, was based on a plan for linear tariff cuts by industrial countries on all industrial products, with a minimum of exceptions, and on the reduction of non-tariff barriers to trade and the creation of acceptable conditions of access to world markets for agricultural products. It concluded in June 1967 after three years of negotiations. Concessions were negotiated on trade valued at over \$36,000 million. The average reductions in tariffs on industrial goods was roughly one-third, while in agriculture the most important item was the agreement reached on the basis for a new world grains arrangement. Overall results were substantial, but were unevenly spread in that efforts to reduce trade barriers were very much more successful for manufactures than for primary products. In the post-Kennedy Round period, therefore, Australia is placing particular emphasis on the work of the Committee on Agriculture, created in November 1967, to examine the problems in the agricultural sector.

Up to the end of 1972 the contracting parties had held twenty-eight sessions, nearly all in Geneva, to deal with matters arising from the administration of the Agreement. As a general rule the contracting parties meet once a year, although in a few instances they have met twice. In 1960 a Council of Representatives was established to undertake work, both of an urgent and of a routine character, between the regular sessions of the contracting parties. Some of the provisions of the Agreement were revised in 1954 and 1955. The revised Agreement contains tighter provisions on non-tariff barriers to trade, and allows more freedom for countries to revise individual tariff items which had been bound against an increase in tariff negotiations under the Agreement.

Since G.A.T.T. has not been accepted definitively by any country except Haiti, the Agreement is at present being applied provisionally pursuant to a Protocol of Provisional Application. On 1 January 1973, eighty-one countries, whose foreign trade represents well over eighty per cent of the total volume of world trade, were full contracting parties to the Agreement, one had acceded provisionally, and fifteen applied the Agreement on a *de facto* basis.

Increasing attention has been focused in G.A.T.T. on specific trade and development problems of developing countries, and in February 1965 a new Part IV of G.A.T.T., aimed at helping developing countries solve these problems, was introduced on a *de facto* basis. It entered legally into force in June 1966. The new Part IV embodies commitments to individual and joint action by contracting parties, aimed at ensuring that the developing countries can increasingly find the means to raise standards of living and promote rapid economic development through participating in international trade and achieving sustained growth of their export earnings.

As a means of helping to offset the competitive disadvantages faced by the new industries of the developing countries, and of putting these countries in a better position to compete with major industrial countries in the Australian market, Australia formulated in 1965 a system of tariff preferences for developing countries on a range of manufactured and semi-manufactured products, all of which had been nominated by developing countries as being of export interest to them. It was recognised that Australia's initiative might well give a lead to other countries which might wish to use preferences to assist developing countries, and so lead to a compounding of the benefits to the

developing countries. Before the Australian system could be introduced, it was necessary to obtain a waiver from the G.A.T.T. 'no-new-preference' provisions. Such a waiver was granted at the end of March 1966 and the first preferences for developing countries became effective in April 1966. The Australian system has been extended in scope from time to time and is successfully stimulating imports of the products concerned from developing countries. Features of the system are that it is non-reciprocal (in that Australia seeks nothing in return), that it contains safeguards for Australian industries and for the interests of third countries, and that it is subject to international supervision through the G.A.T.T.

### **Bilateral agreements**

*Britain.* The original United Kingdom/Australia Trade Agreement (Ottawa Agreement) came into effect on 20 August 1932. The provisions and history of the Agreement were published in Year Book No. 43, page 329. The latest Agreement, the United Kingdom/Australia Trade Agreement (U.K.A.T.A.) arose from the re-negotiation of the Ottawa Agreement to correct an imbalance in trade which had developed in Britain's favour. It came into effect on 9 November 1956 and superseded the Ottawa Agreement. (See also Year Book No. 51, page 495.)

Briefly, U.K.A.T.A. provided for duty-free access for most products and preferences on a range of Australian products imported into Britain, in return for commitments with regard to the setting of tariff levels and preferential tariff treatment for British goods imported into Australia.

Following British entry into the European Economic Community U.K.A.T.A. was terminated on 31 January 1973.

*Canada.* The existing agreement between Australia and Canada came into force on 30 June 1960, replacing an agreement signed on 3 August 1931. The Agreement provides for Australian goods to receive British Preferential Tariff rates, or better, upon entry into Canada, and for Canada to maintain margins of preference in favour of Australia on a range of commodities. The agreement specifies that Canadian goods, with some exceptions, shall receive the benefit of the British Preferential Tariff upon importation into Australia and that Australia shall maintain margins of preference in favour of Canada on a range of commodities. The agreement continues subject to six months notice.

*New Zealand.* The New Zealand/Australia Free Trade Agreement came into force on 1 January 1966. The agreement provides for free trade in certain scheduled goods. Provision is made for the addition of items to the schedule. The provisions of the 1933 Trade Agreement between Australia and New Zealand continue in force as part of the Free Trade Agreement, except as superseded or modified by it.

*Rhodesia.* A trade agreement was negotiated with the Federation of Rhodesia and Nyasaland in June 1955 and, following the dissolution of the Federation on 31 December 1963, was continued on a provisional basis with each of the three constituent territories Zambia (Northern Rhodesia), Rhodesia (Southern Rhodesia) and Malawi (Nyasaland). Zambia terminated the Trade Agreement with Australia on 30 June 1966 and the Agreement between Malawi and Australia lapsed on 1 January 1967 (although preferences continue to be exchanged in the case of Malawi). Following the unilateral declaration of independence by the Rhodesian Government in November 1965 the trade agreement became inoperative.

*Malaysia.* A trade agreement with the then Federation of Malaya became effective in August 1958. Under the agreement Malaya undertook to protect Australian wheat and flour from dumped or subsidised competition and to extend to Australia any tariff preferences it accords. Australia guaranteed free entry for natural rubber so long as the Papua New Guinea crop was absorbed, and assured the Federation that natural rubber would not be at a disadvantage compared with synthetic rubber in respect of tariff or import licensing treatment. The Agreement continues to apply between Australia and that portion of Malaysia known previously as the Federation of Malaya.

*Japan.* An Agreement on Commerce between the Commonwealth of Australia and Japan was signed on 6 July 1957, and formally ratified on 4 December 1957. It was provided that the Agreement would remain in force until 5 July 1960, and thereafter unless prior notice of termination should be given by either Government. The agreement provides that each country shall extend most-favoured-nation treatment to the other in respect of customs duties and similar charges, and import and export licensing. Japan is not entitled to claim the benefit of preferences accorded by Australia to Commonwealth countries and dependent territories. Japan also gave certain specific commitments on some important Australian export commodities.

Following a review of the agreement, a Protocol of Amendment was signed on 5 August 1963 and formally ratified on 27 May 1964. Under the Protocol Australia agreed to withdraw action against Japan under Article XXXV of the General Agreement on Tariffs and Trade, and thus a full G.A.T.T. relationship was established between the two countries.



The specific undertakings agreed in 1957 lapsed and the following commitments were entered into.

Japan has:

- (a) undertaken not to accord less favourable import treatment (apart from tariff) for raw wool than for raw cotton,
- (b) stated that it has no present intention of imposing a duty on wool,
- (c) undertaken to continue imports of Australian soft wheat at a stabilised level, and to purchase Australian hard wheat\* when necessary requirements are met,
- (d) stated that it will endeavour to expand opportunities for imports into Japan of Australian sugar, canned meat, leather, motor vehicles, butter, and cheese.

Australia has:

- (a) undertaken to consult Japan on temporary protection cases affecting Japanese products (in such consultations Japan will consider whether the need for temporary protection can be obviated by measures taken in Japan),
- (b) stated that equal opportunities of fair and equal competition are accorded to Japanese products in Australian Government purchases overseas.

The new agreement became effective for three years from the date of ratification (27 May 1964) and thereafter subject to three months' notice of termination by either Government.

*Indonesia.* The trade agreement between Indonesia and Australia came into operation on 1 July 1959. This agreement was re-negotiated in 1972. The new agreement signed on 14 November 1972 is a most-favoured-nation agreement, establishing the G.A.T.T. as the principle governing the conduct of bilateral trade, and covers support for A.S.E.A.N., and international commodity agreements, encouragement of Australian investment in Indonesia, protection of the interests of Australian consultants and contractors, and consultation on shipping matters.

*Philippines.* A trade agreement with the Philippines was signed in Manila on 16 June 1965. The agreement provides for an exchange of non-discriminatory treatment† while recognising existing preferences. The agreement operated for one year initially and will continue until one Government gives ninety days' notice of its intention to terminate it. The Philippines is not a member of G.A.T.T.

*Korea.* On 21 September 1965 a trade agreement was signed in Seoul between Australia and South Korea. Basically the agreement provides for an exchange of non-discriminatory treatment with allowances for existing preferences. The agreement ran for one year initially but has provision for automatic extension. Both Governments undertook to use their best endeavours to increase the volume of trade between the two countries.

*Eastern Europe.* Australia has signed trade agreements with seven East European countries: U.S.S.R. (15 October 1965), Poland (20 June 1966), Bulgaria (22 June 1966), Romania (18 May 1967), Hungary (5 December 1967), Yugoslavia (21 July 1970) and Czechoslovakia (16 May 1972).

These agreements provide basically for mutual exchange of most-favoured-nation treatment with provision for consultation on request by either party.

## Trade services

### Trade Commissioner Service

The stimulation of interest abroad in Australia's exports is an important government activity in which the Australian Trade Commissioner Service plays a prominent part. A brief account of the establishment and growth of the Trade Commissioner Service before the 1939-45 War is available in Year Book No. 51, page 496. Since the War the service has increased steadily, and by early 1973 there were 160 Trade Commissioners and Assistant Trade Commissioners in Australia and in 51 posts in 37 countries.

Trade Commissioners are responsible for commercial intelligence in their territories. Particular facilities provided for Australian exporters and export organisations include: surveys of market prospects; advice on selling and advertising methods; arranging introductions with buyers and agents; providing reports on the standing of overseas firms; advice and assistance to business visitors; helping to organise and carry through trade missions, trade displays, newspaper supplements, and other promotion and publicity media; providing information on import duties, import licensing, economic conditions, quarantine and sanitary requirements, and other factors affecting the entry and sale of goods; helping to attract desirable investment.

\* 'Soft' wheat is fair average quality wheat; 'hard' wheat is premium grade wheat similar to that grown in North America. † An agreement, with reservations, not to discriminate against each other with tariff or non-tariff barriers.



In some countries Trade Commissioners also participate in inter-governmental negotiations in the economic and commercial fields. In certain countries where there is no diplomatic or consular mission Trade Commissioners are called upon to act as the Australian representative.

Trade Commissioners and Assistant Trade Commissioners are drawn from either private enterprise or the public service, and applications for entry into the Service are invited periodically by public advertisement. Recruitment is generally at the Assistant Trade Commissioner level and persons selected are promoted to Trade Commissioner as experience and performance warrant. In the majority of posts the Trade Commissioner is supported by an Assistant Trade Commissioner.

The Trade Commissioner Service is administered by the Commonwealth Department of Overseas Trade (as distinct from the diplomatic and consular services administered by the Department of Foreign Affairs), but in countries where there is an Australian diplomatic or consular mission it is the practice for Trade Commissioners to be attached to the mission and to hold an appropriate diplomatic or consular rank (Commercial Counsellor, Commercial Secretary or Commercial Attaché).

The overseas trade representation is shown in the chapter International Relations.

### **Trade Missions**

Since 1954 the Australian Government has sent trade missions abroad as part of the campaign to increase exports. The experience acquired has indicated the need for flexibility in techniques to suit particular products or markets. At present the following types of trade missions are in use.

*Survey missions.* These are organised to obtain precise knowledge about the export trade potential for specific products in an overseas market. Such methods are used to explore export prospects in new or developing areas where commercial intelligence is not readily available or where a complex industry is involved and the industry requires special export knowledge.

*Specialised and general trade missions.* Arrangements are made for specific industries or groups of firms representing a number of industries to participate in a planned selling campaign in overseas markets with known sales potential. The mission visits the market, publicises its products and negotiates sales.

Up to the end of 1972 Australia has sent overseas 77 trade and survey missions and 5 trade ships.

### **Trade displays, fairs, exhibitions and store promotions**

For many years Australia has participated in numerous major trade fairs, exhibitions and displays in Africa, Asia, Europe, the Americas and the Pacific Area.

Initially the emphasis was on participation in general trade fairs directed at the public and the general commercial community. With the development of export promotion techniques and the greater diversity of goods available for export, greater emphasis is now being placed on individual Australian trade displays and participation in specialised trade shows directed almost entirely at the business community. In addition, display rooms in Trade Commissioner offices are currently in use in Singapore, Kuala Lumpur, Manila and Hong Kong.

### **Export of consulting services**

Australian professional consultants have been increasingly successful in obtaining overseas commissions and are contributing significantly to Australia's foreign exchange earnings.

The Australian Professional Consultants Council, consists of members of the Royal Australian Planning Institute, the Institute of Surveyors of Australia, the Royal Australian Institute of Architects, the Association of Consulting Engineers of Australia, the Institute of Quantity Surveyors, the Institute of Agricultural Science, the Snowy Mountains Engineering Corporation and the Australian Mineral Development Laboratories. The Council assists the members of the professions concerned to obtain overseas commissions. The Council also acts as a liaison body for the government in its efforts to promote the export of consulting services.

Most opportunities for Australian professional consultants arise through development projects financed by international aid and lending organisations such as the International Bank for Reconstruction and Development, United Nations Development Programme and the Asian Development Bank.

However, Australian consultants are continuing to have significant successes in securing commissions from the private sector, particularly in South-East Asia.

### Construction contracts overseas

The Australian Overseas Construction Council has been formed by the Master Builders' Federation of Australia and the Australian Federation of Construction Contractors to assist construction contractors to win contracts overseas.

Australian construction contractors have recently entered the South-East Asian market and are also operating more actively in the Pacific Area.

Some of the best opportunities have been found in the civil engineering field in the construction of highways, bridges and dry docks but there are also many contracts being let for the erection of multi-storey office and hotel buildings.

## Export Payments Insurance Corporation

The Export Payments Insurance Corporation was established by the Commonwealth Government in 1956 with the objective of encouraging exports by providing insurance against risks of non-payment of overseas accounts. The Corporation is charged to be self-supporting, i.e. over a period its income should be adequate to cover the expenses of operation and any payments of claims which may be incurred.

The main risks of loss against which the Corporation insures are the 'commercial' risks of the insolvency or protracted default of the buyer and 'political' risks. The latter include exchange transfer difficulties; the imposition of government regulations which prevent the import of the goods into the buyer's country; war, revolution or civil disturbance in the buyer's country. For most 'political' risks insurance cover is available to a maximum of 90 per cent of the amount of loss in the pre-shipment period and a maximum of 95 per cent in the post-shipment period. The rate of cover for 'commercial' risks is fixed at 90 per cent.

The Corporation may submit to the Government, for consideration in the national interest, applications for payment insurance which are commercially unacceptable to the Corporation. In considering such applications the Government takes account of both political and economic factors.

Several important amendments have been made to the Export Payments Insurance Corporation Act, each of which widened the scope of the Corporation's activities. An amendment in November 1964 authorised E.P.I.C. to issue guarantees of payments to commercial lending institutions on money raised for the purpose of financing exports. A further amendment in November 1971 permitted the Corporation to extend its guarantee facility to credit made available by lending institutions direct to the overseas buyer. The facility known as 'buyer credit facility' was intended to cater for the export of capital goods and services on extended repayment terms. It is designed to supplement supplier credits and thus widen the range of facilities available to Australian exporters.

Re-insurance facilities were introduced by E.P.I.C. following an amendment to the Export Payments Insurance Corporation Act in January 1972. The Corporation is now able to enter into re-insurance arrangements with its overseas counterpart institutions or export contracts with a substantial foreign content.

In addition to providing the above facilities, the Corporation insures, on behalf of the Commonwealth Government, eligible Australian investments in overseas countries against the main non-commercial risks associated with investing overseas, e.g. expropriation, exchange transfer difficulties, and war damage. For an investment to be eligible it must confer benefits on both Australia and the investment host country. At 30 December 1972, 101 policies had been written for 32 investments mainly in South-East Asia. The face value of these policies was \$49 million.

Since the first policy was issued in September 1957, Australian exporters have made increasing use of the facilities of E.P.I.C. At 30 December 1972 the Corporation had 1,090 policies current on its commercial account (i.e. not including Government business) with a face value of over \$686 million. The majority of transactions have been on a short or medium term basis using a supplier credit facility (i.e. insured credit being extended to the overseas buyer by the exporter with the financial support of private lending institutions). The Corporation has issued policies covering exports to 154 countries and has insured a wide range of Australian exports.

A Consultative Council, composed of eight leading figures in the fields of banking, commerce and industry, and two Government members advises the Corporation on its activities. The council meets two or three times a year and is appointed for a term of three years.

Further information on the Corporation is contained in Year Book No. 49, page 544. For particulars of its operations see Chapter 17, Private Finance of this Year Book.

## Collection and presentation of statistics

### Basic documents and scope of overseas trade statistics

Overseas trade statistics are compiled by the Commonwealth Bureau of Census and Statistics from copies of export and import entries submitted by exporters and importers or their agents to the Department of Customs and Excise as required by the Customs Act. The statistics are not confined to goods which are the subject of a commercial transaction and all goods moving into or out of Australia are recorded, except for those exclusions listed below. Among the items included are exports and imports on government account including some items of defence equipment, and outside packages (that is, the outside package or outside covering of the goods). Outside packages are included as a separate item in the tabulation of imports but in exports the value recorded for each item includes the value of the outside package.

The following are excluded from overseas trade statistics:

- (a) Direct transit trade, i.e. goods being transhipped or moved through Australia for purposes of transport only.
- (b) Bunkers and stores supplied to vessels and aircraft. (However, a separate 'Ships' Stores' collection is made and details are shown on page 311.)
- (c) Those migrants' and passengers' effects for which a customs entry is not received.
- (d) Those parcel post exports and imports of small value for which customs entries are not received.
- (e) Certain materials for intergovernmental defence projects for which customs entries are not required.
- (f) The value of ores and concentrates exported and imported includes the value of the content of other metals (e.g. gold, silver). These unseparated metals are thus excluded from the value of gold, silver etc. exported and imported as such.
- (g) Vessels and aircraft engaged in the transport of passengers or goods between Australia and other countries.
- (h) Vessels and aircraft purchased for use on overseas routes and any subsequent sales made of such vessels and aircraft.
- (i) Fish and other sea products landed abroad directly from the high seas by Australian vessels.

### Areas applying

The area to which all overseas trade statistics issued by this Bureau apply is the whole of the Commonwealth of Australia, comprising the six States, the Northern Territory and the Australian Capital Territory. Non-contiguous territories under Australian administration are treated as outside countries. Trade transactions between Australia and those non-contiguous territories are part of the overseas trade of Australia and are published separately in Australia's overseas trade statistics.

### Period covered by the statistics

Exports and imports are recorded statistically in the month in which the entries are passed by the Department of Customs and Excise. Normally this is within a few days of loading or discharge of cargo. Delays sometimes occur in the lodging of export entries and import entries may be cleared early using the Customs' check-to-arrive system.

### Containerised goods

Containerised goods forwarded interstate for export through a container terminal are statistically recorded as being exported from the port of location of the Customs House at which the entry was lodged and not necessarily from the port of loading in Australia. For example, containerised goods for which entries were lodged at the Customs House, Port Adelaide but forwarded interstate to Port Melbourne for export would be recorded statistically as exports from Port Adelaide, hence from South Australia and not Victoria. The same method of recording applies to imports of containerised goods forwarded interstate following discharge from an overseas vessel.

### Valuation

Commencing with the Bureau publications issued at the close of 1965 values in overseas trade statistics have been expressed in \$A. Prior to this values were expressed in £ (Aust.) except for imports into Australia which, up until 15 November 1947, were recorded in British currency values. Full explanatory notes on the methods of recording import values before and since 15 November 1947 were included in Year Book No. 37, page 396.



All values in overseas trade statistics are determined on a 'free on board (f.o.b.) port of shipment' basis. This means that all charges (in particular the cost of freight and insurance) incurred after the goods have been exported from the port of shipment are excluded. Only transport and service charges incurred, or usually incurred, prior to export are included in the determination of trade values.

The procedure adopted to value exports and imports is as follows:

*Exports.* The recorded value of goods exported includes the cost of outside packages and has been determined, since July 1937, as follows.

- (a) Goods sold to overseas buyers before export are valued at the Australian f.o.b. port of shipment equivalent of the actual price at which the goods were sold.
- (b) Goods shipped on consignment are valued at the Australian f.o.b. port of shipment equivalent of the price paid for similar goods of Australian origin in the principal markets of the country to which they are despatched for sale.

An account of the bases of valuation in operation prior to July 1937 is given on page 396 of Year Book No. 37.

*Imports.* The recorded value of goods imported is the amount on which duty is payable or would be payable if the duty were *ad valorem*. Value for duty of any goods shall be the sum of (a) and (b) below, i.e.:

- (a) the higher of—
  - (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction ('special deduction' is defined as any discount or other deduction allowed to the Australian importer which would not ordinarily have been allowed to any and every purchaser at the date of exportation of an equal quantity of identically similar goods); or
  - (ii) the current domestic value of the goods ('current domestic value' is defined as the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country);
- and
- (b) all charges payable or ordinarily payable for placing the goods free on board at the port of export.

In the case of goods consigned for sale in Australia the 'value for duty' shall be the amount which would be the value for duty if the goods were, at the date of exportation, sold to an Australian importer instead of being consigned for sale in Australia.

*Leasing arrangements.* The recorded value of goods exported, or imported under leasing arrangements is defined as the free on board value, i.e. not the value of the lease receipts or payment. However, for balance of payments purposes, large items of equipment under lease are normally excluded from export and import figures and, therefore, from the balance of trade since no change of ownership has occurred.

### Quantity data

Where quantities are shown they are generally, but not invariably, expressed in terms of the normal unit of quantity used in the appropriate industry. Quantities are not tabulated in respect of statistical items for which there is no appropriate unit of quantity (for example, a statistical item which covers a number of commodities that cannot be recorded under a uniform unit of quantity).

### Statistical concepts of trade

*Trade systems.* There are two generally accepted systems of recording overseas trade statistics defined by the Statistical Office of the United Nations, that is 'special trade' and 'general trade'. The definitions for these are shown in Year Book No. 57 and earlier issues. This terminology is not usually employed in connection with Australian overseas trade statistics and the terms defined below are in customary use.

*Exports of Australian origin* are goods, materials or articles which have been produced, manufactured or partly manufactured in Australia, except goods which were originally imported and have undergone only repair or minor operations which leave them essentially unchanged.

*Re-exports* are goods, materials or articles originally imported which are exported either in the same condition in which they were imported or after undergoing repair or minor operations which leave them essentially unchanged. 'Minor operations' include blending, packaging, bottling, cleaning, sorting, husking and shelling.

*Total exports* are the aggregate of exports of Australian origin and re-exports.

*Import clearances* are imported goods cleared through Customs direct for domestic consumption plus goods cleared from bonded warehouses for domestic consumption (these are comparable to 'special trade').

*Imports* are the combined total of goods imported direct for domestic consumption and imports into bonded warehouses (these are comparable to 'general trade').

*Merchandise and non-merchandise trade.* Total trade is divided into merchandise and non-merchandise trade in accordance with international standards recommended by the United Nations. Merchandise trade is the equivalent of total exports or imports less certain items specified as non-merchandise. A complete description of the commodities included is contained in the *Australian Export and Import Commodity Classifications* (8.3, 8.6) published by the Bureau of Census and Statistics.

#### **Balance of trade and balance of payments**

The balance of trade is derived by comparing statistics of exports on a balance of payments basis with statistics of imports on that basis. Therefore the excess of the value of exports or imports as shown on the basis of total trade in the table on page 296 does not on these bases represent the balance of trade. Statistics of the balance of trade for balance of payments purposes are derived by making certain adjustments, relating both to scope and valuation, to statistics of merchandise exports and imports. Information on these statistics will be found in the section relating to the balance of payments, page 320.

#### **Country of consignment or origin**

'Country of consignment' referred to in export tables means the country to which goods were consigned at the time of export. Where the country of consignment is not determined at the time of export the goods are recorded as exported 'For orders'. 'Country of origin' referred to in import tables means the country of production. Classification of imports according to country of shipment was discontinued after the year 1920-21. A brief account of the dual system of import classification by country operating prior to the year 1921-22 is given on page 500 of Year Book No. 51.

#### **Commodity classifications**

Exports and imports are classified according to the Australian Export and Import Commodity Classifications. These classifications are based on the Standard International Trade Classification, Revised (S.I.T.C.), which is closely related to the Brussels Tariff Nomenclature used in the Australian Customs Tariff.

#### **Pre-federation records**

In the years preceding federation each State recorded its trade independently and in so doing did not distinguish other Australian States from external countries. The aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, but the results obtained are subject to error, since past records of values and the direction of exports and imports were not on uniform lines. Exports and imports for years prior to federation may be found in early issues of the Year Book, particularly Year Book No. 2. On the introduction of the *Customs Act* 1901 the methods of recording values were made uniform throughout the States.

# OVERSEAS TRADE: AUSTRALIA

1951-52 TO 1971-72

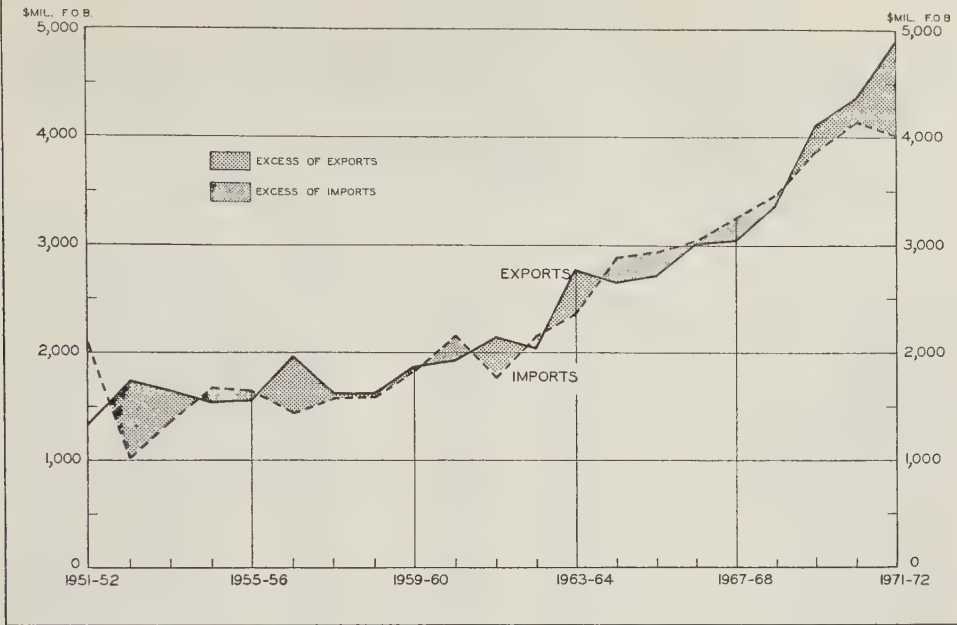


PLATE 26

## VALUE OF EXPORTS AND IMPORTS: AUSTRALIA PROPORTIONS BY COUNTRY 1967-68 TO 1971-72

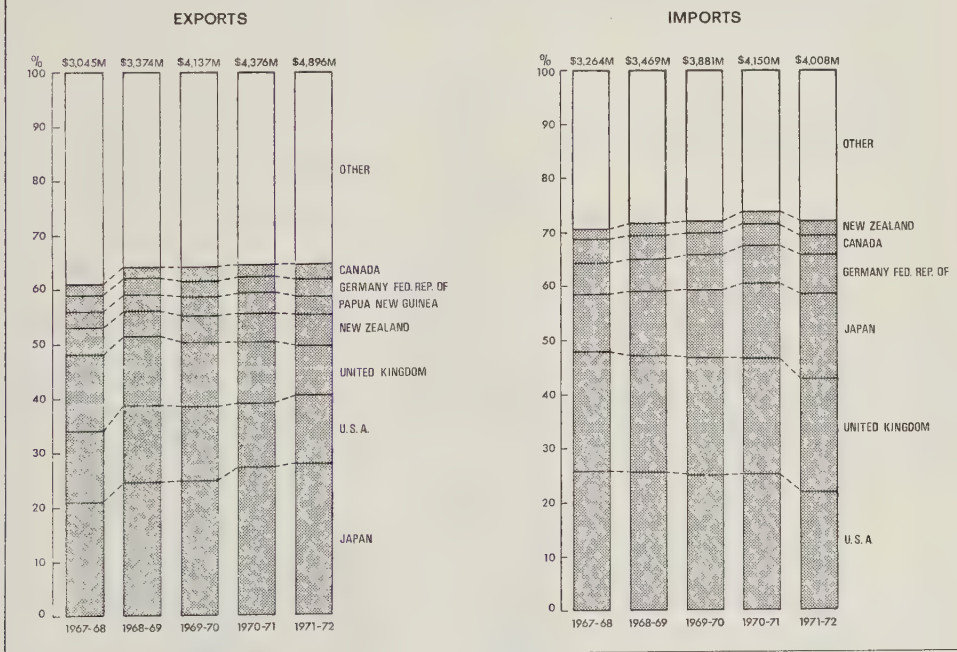


PLATE 27



### Total overseas trade

The following table shows the total trade of Australia with overseas countries from 1901 to 1971-72. The period 1901 to 1970-71 has been divided into five-year periods, and the figures shown represent the annual averages for the periods specified. Figures for the individual years were published in earlier issues, but figures for imports in issues prior to No. 37 were expressed in British currency.

#### OVERSEAS TRADE: AUSTRALIA, 1901 TO 1971-72 (f.o.b.)

Period	Exports	Imports	Excess of exports (+) or imports (-)	Value per head of population	
				Exports	Imports
	\$m	\$m	\$m	\$	\$
Annual average—					
1901 to 1905 . . . . .	102	71	+ 31	26.2	18.2
1906 to 1910 . . . . .	(a)139	94	+ 45	32.6	22.0
1911 to 1915-16 . . . . .	149	133	+ 16	30.8	27.6
1916-17 to 1920-21 . . . . .	230	183	+ 47	43.8	34.8
1921-22 to 1925-26 . . . . .	269	249	+ 20	45.8	42.2
1926-27 to 1930-31 . . . . .	263	239	+ 24	41.0	37.2
1931-32 to 1935-36 . . . . .	242	148	+ 94	36.2	22.2
1936-37 to 1940-41 . . . . .	315	247	+ 68	45.4	35.6
1941-42 to 1945-46 . . . . .	328	423	- 95	44.8	58.2
1946-47 to 1950-51 . . . . .	1,143	899	+244	145.4	114.3
1951-52 to 1955-56 . . . . .	1,572	1,566	+ 6	176.4	175.6
1956-57 to 1960-61 . . . . .	1,811	1,729	+ 82	182.0	173.7
1961-62 to 1965-66 . . . . .	2,492	2,430	+ 62	224.8	218.6
1966-67 to 1970-71 . . . . .	3,591	3,562	+ 29	293.4	291.4
Year—					
1967-68 . . . . .	3,045	3,264	-220	255.3	273.7
1968-69 . . . . .	3,374	3,469	- 94	277.2	285.0
1969-70 . . . . .	4,137	3,881	+256	332.3	312.1
1970-71 . . . . .	4,376	4,150	+226	343.7	326.0
1971-72 . . . . .	4,896	4,008	+888	377.8	309.3

(a) Prior to 1906, ships' stores were included in exports. For value of such goods loaded on overseas vessels and aircraft during each of the years 1969-70 to 1971-72, see page 311.

Plate 26 on page 295 shows the overseas trade of Australia from 1951-52 to 1971-72.

The following table shows particulars of merchandise and non-merchandise trade for each of the years 1967-68 to 1971-72.

#### MERCHANDISE AND NON-MERCHANDISE TRADE: AUSTRALIA, 1967-68 TO 1971-72 (\$'000 f.o.b.) EXPORTS

Year	Merchandise			Non-merchandise			Total
	Australian produce	Re-exports	Total	Australian produce	Re-exports	Total	
1967-68 . . . . .	2,861,812	73,388	2,935,200	73,344	36,132	109,476	3,044,675
1968-69 . . . . .	3,156,231	84,054	3,240,283	88,848	45,131	133,980	3,374,263
1969-70 . . . . .	3,868,717	131,090	3,999,807	97,146	40,269	137,415	4,137,222
1970-71 . . . . .	4,119,518	123,117	4,242,635	81,428	51,694	133,122	4,375,757
1971-72 . . . . .	4,643,257	133,148	4,776,405	76,173	43,803	119,976	4,896,381

#### IMPORTS

Year	Merchandise	Non-merchandise	Total
1967-68 . . . . .	3,215,003	49,470	3,264,473
1968-69 . . . . .	3,423,276	45,229	3,468,505
1969-70 . . . . .	3,822,623	58,604	3,881,227
1970-71 . . . . .	4,098,560	51,468	4,150,028
1971-72 . . . . .	3,954,775	53,590	4,008,365

## Classified summary of Australian overseas trade

The following table shows exports and imports according to divisions of the Australian Export and Import Commodity Classifications (based on the Standard International Trade Classification, Revised) during each of the years 1969-70 to 1971-72.

EXPORTS AND IMPORTS: DIVISIONS OF THE AUSTRALIAN EXPORT AND  
IMPORT COMMODITY CLASSIFICATIONS, 1969-70 TO 1971-72  
(\$'000 f.o.b.)

Division No.	Description	Exports			Imports		
		1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
00	Live animals	7,358	10,187	10,690	4,355	5,633	5,512
01	Meat and meat preparations	417,909	428,528	558,263	2,288	1,415	1,403
02	Dairy products and eggs	102,254	101,522	113,062	5,757	5,863	7,040
03	Fish and fish preparations	39,107	55,878	74,137	33,368	42,025	41,813
04	Cereals and cereal preparations	431,792	596,024	623,361	4,747	5,397	5,413
05	Fruit and vegetables	94,102	107,040	96,265	23,855	25,437	27,510
06	Sugar, preparations, honey	121,848	160,068	223,074	3,004	3,017	3,210
07	Coffee, tea, cocoa, and spices	4,240	5,583	9,652	51,396	53,878	53,299
08	Feeding stuff for animals	12,406	11,883	16,156	6,882	9,613	7,760
09	Miscellaneous food preparations	3,500	3,554	3,779	4,199	5,451	6,832
11	Beverages	7,623	9,819	11,448	16,469	20,483	22,339
12	Tobacco and tobacco manufactures	2,982	4,770	4,168	31,975	29,649	28,197
21	Hides, skins and fur skins, undressed	89,922	73,709	82,196	1,664	1,185	1,169
22	Oil seeds, oil nuts and oil kernels	1,094	2,012	11,284	9,897	6,841	4,392
23	Crude rubber (including synthetic and reclaimed)	806	1,345	1,128	30,111	23,218	22,635
24	Wood, timber and cork	4,397	4,271	5,634	53,077	52,793	51,795
25	Pulp and waste paper	411	458	297	36,550	38,448	30,671
26	Textile fibres and their waste	768,802	549,649	586,548	33,815	37,031	43,014
27	Crude fertilisers and minerals (except coal, petroleum and precious stones)	9,524	16,329	12,292	60,989	51,863	45,148
28	Metalliferous ores and metal scrap	508,490	628,236	619,279	7,787	7,966	5,506
29	Crude animal and vegetable materials, n.e.s.	14,636	16,512	19,301	13,265	15,263	14,364
32	Coal, coke, and briquettes	172,414	206,240	240,262	804	771	487
33	Petroleum and petroleum products	27,722	41,623	60,163	254,390	188,844	193,330
34	Petroleum gases and other gaseous hydrocarbons	(a)	(a)	(a)	45	48	38
41	Animal oils and fats	24,836	27,725	33,303	893	1,177	408
42	Fixed vegetable oils and fats	100	99	484	12,532	14,391	12,093
43	Animal and vegetable oils, fats and waxes, processed	913	1,295	987	2,174	2,073	2,135
51	Chemical elements and compounds	97,912	111,812	155,896	117,454	141,315	139,253
52	Mineral tar and crude chemicals from coal, petroleum and natural gas	256	319	64	2,162	3,214	2,611
53	Dyeing, tanning and colouring materials	8,472	8,880	8,278	22,364	25,488	26,933
54	Medicinal and pharmaceutical products	18,383	24,841	24,277	51,220	58,919	63,627
55	Essential oils and perfume materials; toilet and cleansing preparations	6,104	7,511	11,330	16,505	18,281	17,542
56	Fertilisers, manufactured	844	175	1,327	7,209	6,822	5,831
57	Explosives and pyrotechnic products	2,436	3,167	2,614	4,922	6,668	3,928
58	Plastic materials, regenerated cellulose and artificial resins	6,802	8,806	9,383	91,161	90,011	96,085
59	Chemical materials, n.e.s.	23,537	25,667	31,401	49,726	58,934	54,062
61	Leather, leather manufactures, n.e.s. and dressed fur skins	5,652	5,670	5,905	7,332	6,282	7,370
62	Rubber manufactures, n.e.s.	12,127	9,943	8,701	41,995	59,815	55,886
63	Wood and cork manufactures (excluding furniture)	2,559	4,960	10,498	15,391	17,273	17,819
64	Paper, paperboard and manufactures	12,080	14,388	17,001	107,799	120,058	112,466
65	Textile yarn, fabrics, made-up articles	18,909	23,873	22,119	287,324	301,698	327,136
66	Non-metallic mineral manufactures, n.e.s.	27,042	28,197	29,986	78,267	86,214	88,926
67	Iron and steel	135,707	97,026	116,796	95,286	138,590	121,619
68	Non-ferrous metals	284,112	277,008	299,097	24,515	27,783	22,826
69	Manufactures of metal, n.e.s.	42,466	55,446	56,110	94,650	109,437	101,783
71	Machinery, other than electric	89,804	113,012	129,092	708,828	789,237	717,383
72	Electrical machinery and apparatus	36,927	50,560	54,779	251,367	281,495	291,859
73	Transport equipment	153,071	161,513	190,809	567,496	572,783	473,786
81	Sanitary, plumbing, heating and lighting fixtures and fittings	1,769	2,327	2,452	5,664	6,139	7,152
82	Furniture	1,355	1,720	1,858	5,463	6,314	6,686
83	Travel goods, handbags, etc.	293	220	283	5,740	6,650	7,340
84	Clothing and accessories; articles of knitted or crocheted fabric	9,030	9,579	10,452	34,385	40,725	49,841
85	Footwear, gaiters and similar articles	761	975	1,025	15,481	16,859	25,391
86	Professional, scientific and controlling instruments; photographic and optical goods, watches and clocks	20,106	26,486	30,967	120,711	138,946	136,392
89	Manufactured articles, n.e.s.	23,765	32,259	53,600	162,218	187,743	198,985
9(A)	Commodities and transactions not classified according to kind(b)	88,336	71,936	73,094	123,611	125,094	136,745
	Total merchandise	3,999,807	4,242,635	4,776,405	3,822,623	4,098,560	3,954,775
9(B)	Non-merchandise	137,415	133,122	119,976	58,604	51,468	53,590
	Total	4,137,222	4,375,757	4,896,381	3,881,227	4,150,028	4,008,365

(a) Included in Division 9A. (b) includes Division 34 (Exports only).

## Exports of principal articles of Australian produce

## EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE, 1969-70 TO 1971-72

Article	Quantity			Value (\$'000 f.o.b.)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Meat, fresh, chilled or frozen—						
Of bovine animals—						
Beef—						
Bone-in . . . . .	'000 lb	29,490	71,302	39,596	9,068	21,277
Boneless . . . . .	"	681,602	663,114	823,788	277,858	275,806
Other . . . . .	"	11,810	13,176	23,008	5,202	5,977
Of sheep, lambs and goats . . . . .	"	394,159	386,714	527,920	81,747	74,433
Meat, canned or bottled . . . . .	"	37,715	47,801	62,133	10,318	15,545
Sausage casings (natural) . . . . .	"	..	..	..	8,211	9,782
Other meat (including poultry, game, rabbits) . . . . .	"	..	..	..	33,695	35,433
Milk and cream . . . . .	'000 lb	199,754	202,650	172,715	22,511	26,081
Butter . . . . .	"	218,164	196,758	126,119	52,459	48,040
Cheese . . . . .	"	90,037	80,380	73,478	19,570	18,378
Fish (including shell fish) fresh or preserved by cold process . . . . .	"	25,004	33,634	40,182	36,502	50,440
Wheat . . . . .	tons	6,777,309	8,931,577	8,325,831	337,570	433,000
Barley, unprepared . . . . .	"	622,318	1,105,234	1,788,072	22,766	50,820
Oats . . . . .	"	215,820	547,137	323,783	7,559	23,827
Flour (wheaten), plain white . . . . .	'000 lb	657,666	611,889	361,862	21,185	19,586
Fruit, dried—						
Grapes . . . . .	"	97,268	132,273	124,245	14,361	18,516
All other . . . . .	"	4,828	5,004	7,547	1,717	1,532
Fruit, canned or bottled . . . . .	"	293,417	326,840	276,525	37,230	42,890
Sugar, the produce of cane . . . . .	tons	1,364,307	1,546,434	1,976,270	116,120	149,647
Wine . . . . .	gallons	1,294,786	1,444,029	1,750,387	2,913	3,581
Hides and skins—						
Calf, cattle and horse . . . . .	'000 lb	143,079	158,489	177,781	21,917	20,762
Sheep and lamb (excl. pieces) . . . . .	'000 lb	248,151	260,041	294,158	64,091	49,813
Timber, wood in the rough, shaped or simply worked . . . . .	'000 super ft	24,834	24,980	30,036	4,241	4,168
Wool—						
Greasy . . . . .	'000 kg	711,946	650,027	688,051	683,545	493,073
Scoured or washed, carbonised, tops, noils and waste . . . . .	"	53,947	45,314	57,407	77,498	50,754
Iron ore and concentrates (except roasted iron pyrites) . . . . .	tons	33,244,279	47,583,953	49,245,626	277,810	374,260
Copper ores and concentrates . . . . .	"	64,082	138,002	139,162	14,620	32,031
Lead ores and concentrates . . . . .	"	119,468	81,784	92,059	23,320	16,290
Zinc ores and concentrates . . . . .	"	430,216	377,424	358,395	30,503	25,502
Titanium and zirconium concentrates . . . . .	"	1,276,133	1,365,109	1,406,286	49,629	57,278
Coal . . . . .	"	17,344,788	18,681,751	21,563,213	164,330	199,413
Petroleum and petroleum products . . . . .	"	..	..	..	27,427	40,984
Tallow, inedible . . . . .	cwt	3,019,497	2,739,091	3,930,465	20,455	22,015
Leather (excl. leather manufactures) . . . . .	"	..	..	..	4,520	4,114
Lead and ead alloys, unworked . . . . .	cwt	6,670,659	6,032,503	5,356,180	105,956	86,716
Copper and copper alloys . . . . .	"	1,243,193	1,202,677	1,478,465	91,044	66,858
Zinc and zinc alloys . . . . .	"	3,045,450	2,693,401	3,748,391	38,736	35,713
Machinery and transport equipment . . . . .	"	..	..	..	207,235	244,690
Drugs and chemicals . . . . .	"	..	..	..	132,946	185,284
Paper, pulp and stationery . . . . .	"	..	..	..	17,743	18,530
Motor vehicles (new, assembled) . . . . .	No	13,255	16,897	19,400	21,374	21,992
All other articles . . . . .	"	..	..	..	768,361	826,115
<b>Total Australian produce . . . . .</b>					<b>3,965,863</b>	<b>4,200,946</b>
						<b>4,719,430</b>



## Exports, by industrial group

The following table provides an analysis of Australian exports for the years 1969-70 to 1971-72. This analysis is designed to show fluctuations in exports of Australian produce dissected according to the main industry of their origin, although any such classification is necessarily somewhat conventional.

EXPORTS OF AUSTRALIAN PRODUCE, BY INDUSTRIAL GROUP  
1969-70 TO 1971-72

Industrial group	Value (\$'000 f.o.b.)			Proportion of value of exports of Australian produce (ex- cluding gold) (per cent)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
<b>Agriculture, horticulture and viti- culture—</b>						
Unprocessed . . . . .	435,885	597,698	633,001	11.1	14.3	13.5
Processed . . . . .	222,068	274,644	328,799	5.6	6.6	7.0
<b>Total agriculture, etc. . . . .</b>	<b>657,953</b>	<b>872,342</b>	<b>961,800</b>	<b>16.7</b>	<b>20.9</b>	<b>20.5</b>
<b>Pastoral—</b>						
Unprocessed . . . . .	1,175,913	974,092	1,137,381	29.9	23.3	24.2
Processed . . . . .	137,083	122,987	143,581	3.5	2.9	3.1
<b>Total pastoral . . . . .</b>	<b>1,312,996</b>	<b>1,097,079</b>	<b>1,280,962</b>	<b>33.4</b>	<b>26.2</b>	<b>27.3</b>
<b>Dairy and farmyard—</b>						
Unprocessed . . . . .	8,779	8,045	11,247	0.2	0.2	0.2
Processed . . . . .	100,985	99,609	109,350	2.6	2.4	2.3
<b>Total dairy, etc. . . . .</b>	<b>109,764</b>	<b>107,654</b>	<b>120,597</b>	<b>2.8</b>	<b>2.6</b>	<b>2.5</b>
<b>Mines and quarries (other than gold)—</b>						
Unprocessed . . . . .	649,473	758,816	817,851	16.5	18.1	17.4
Processed . . . . .	304,715	278,845	285,976	7.7	6.7	6.1
<b>Total mines, etc. . . . .</b>	<b>954,188</b>	<b>1,037,661</b>	<b>1,103,827</b>	<b>24.2</b>	<b>24.8</b>	<b>23.5</b>
<b>Fisheries—</b>						
Unprocessed . . . . .	39,707	53,190	68,363	1.0	1.3	1.4
Processed . . . . .	2,960	6,572	7,271	0.1	0.1	0.2
<b>Total fisheries . . . . .</b>	<b>42,667</b>	<b>59,762</b>	<b>75,634</b>	<b>1.1</b>	<b>1.4</b>	<b>1.6</b>
<b>Forestry—</b>						
Unprocessed . . . . .	507	630	404	..	..	..
Processed . . . . .	5,304	5,290	6,963	0.1	0.1	0.1
<b>Total forestry . . . . .</b>	<b>5,811</b>	<b>5,920</b>	<b>7,367</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>Total primary produce—</b>						
Unprocessed . . . . .	2,310,264	2,392,471	2,668,247	58.7	57.2	56.8
Processed . . . . .	773,115	787,947	881,940	19.6	18.8	18.7
<b>Total primary produce . . . . .</b>	<b>3,083,379</b>	<b>3,180,418</b>	<b>3,550,187</b>	<b>78.3</b>	<b>76.0</b>	<b>75.5</b>
<b>Manufactures . . . . .</b>	<b>719,023</b>	<b>855,520</b>	<b>985,815</b>	<b>18.3</b>	<b>20.5</b>	<b>21.0</b>
Refined petroleum oils . . . . .	26,731	40,080	57,784	0.7	1.0	1.2
Unclassified . . . . .	107,345	106,677	106,348	2.7	2.5	2.3
<b>Total Australian produce (excluding gold) . . . . .</b>	<b>3,936,477</b>	<b>4,182,695</b>	<b>4,700,134</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Re-exports (excluding gold) . . . . .</b>	<b>171,359</b>	<b>174,811</b>	<b>176,951</b>	<b>..</b>	<b>..</b>	<b>..</b>
<b>Gold exports . . . . .</b>	<b>29,385</b>	<b>18,251</b>	<b>19,296</b>	<b>..</b>	<b>..</b>	<b>..</b>
<b>Total value of recorded exports</b>	<b>4,137,222</b>	<b>4,375,757</b>	<b>4,896,381</b>	<b>..</b>	<b>..</b>	<b>..</b>

The items enumerated indicate how arbitrary is the line necessarily drawn between primary produce and manufactures in any classification of this kind. The value of processed primary products exported includes some element of value added by the simpler processes of manufacture, while the value shown for manufactures exported necessarily includes the value of raw materials (primary produce) used in those manufactures.

### Imports of merchandise, by economic class

The following table shows imports of merchandise into Australia during the years 1969-70 to 1971-72 classified according to economic classes of (i) purpose and (ii) degree of manufacture.

#### IMPORTS OF MERCHANDISE, BY ECONOMIC CLASS: AUSTRALIA 1969-70 TO 1971-72

	Value (\$'000 f.o.b.)			Proportion of value of imports of merchandise (per cent)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
PURPOSE						
Producers' materials for use in—						
Building and construction . . . . .	132,651	146,947	135,533	3.5	3.6	3.4
Rural industries . . . . .	51,124	45,383	40,768	1.3	1.1	1.0
Manufacturing—						
Motor vehicle assembly(a) . . . . .	288,070	288,100	256,379	7.5	7.0	6.5
Other(b) . . . . .	1,257,031	1,297,846	1,257,555	32.9	31.7	31.8
Total producers' materials(b) . . . . .	1,728,876	1,778,276	1,690,234	45.2	43.4	42.7
Capital equipment(c)—						
Producers' equipment . . . . .	858,196	981,930	915,335	22.4	24.0	23.2
Transport equipment—						
Complete road vehicles and assembled chassis . . . . .	121,324	155,285	159,533	3.2	3.8	4.0
Railway equipment, vessels and civil aircraft . . . . .	108,499	137,780	90,072	2.8	3.3	2.3
Total capital equipment . . . . .	1,088,019	1,274,995	1,164,940	28.4	31.1	29.5
Finished consumer goods—						
Food, beverages and tobacco . . . . .	142,879	157,234	165,121	3.8	3.8	4.2
Clothing and accessories . . . . .	45,382	57,108	76,438	1.2	1.4	1.9
All other(d) . . . . .	578,359	580,210	628,298	15.1	14.2	15.9
Total, finished consumer goods(d) . . . . .	766,620	794,552	869,857	20.1	19.4	22.0
Fuels and lubricants(e) . . . . .	47,905	61,495	69,406	1.3	1.5	1.8
Auxiliary aids to production(f) . . . . .	95,875	99,823	100,515	2.5	2.4	2.5
Munitions and war stores . . . . .	95,328	89,419	59,824	2.5	2.2	1.4
Grand total . . . . .	3,822,623	4,098,560	3,954,775	100.0	100.0	100.0
DEGREE OF MANUFACTURE(g)						
Producers' materials—						
Crude . . . . .	415,145	318,073	301,730	10.9	7.8	7.6
Simply transformed . . . . .	272,213	291,021	291,038	7.2	7.1	7.4
Elaborately transformed . . . . .	1,041,518	1,169,182	1,097,466	27.2	28.5	27.8
Finished consumer goods—						
Crude . . . . .	34,106	44,853	39,404	0.9	1.1	1.0
Simply transformed . . . . .	47,784	56,543	61,469	1.2	1.4	1.6
Elaborately transformed . . . . .	684,730	693,156	768,984	17.9	16.9	19.4
Total imports—						
Crude . . . . .	449,251	362,926	341,134	11.8	8.9	8.6
Simply transformed . . . . .	429,473	474,678	484,272	11.2	11.6	12.3
Elaborately transformed . . . . .	2,943,899	3,260,956	3,129,369	77.0	79.5	79.1
Grand total . . . . .	3,822,623	4,098,560	3,954,775	100.0	100.0	100.0

(a) Owing to insufficient information, it is not possible to treat unassembled tractors and other machinery in a similar manner to motor vehicles, and all such machinery and replacement parts therefor are treated as capital equipment whether imported in an assembled or unassembled condition. (b) Excludes a percentage for piece-goods to be sold at retail, and paper to be used solely for wrapping, which are recorded in Finished consumer goods, All other; and Auxiliary aids to production, respectively. (c) See footnote (a). (d) Includes a percentage for piece-goods to be sold at retail; see footnote (b). (e) Excludes crude petroleum, which is included in Producers' materials, Manufacturing—Other. (f) Includes a percentage for paper to be used solely for wrapping; see footnote (b). (g) The class Fuels and lubricants consists of goods 'simply transformed', and the classes Capital equipment and Munitions and war stores entirely of goods 'more elaborately transformed'. The class Auxiliary aids to production is about equally divided between goods 'simply transformed' and 'elaborately transformed'.

## Direction of Overseas Trade

## Exports and imports, by country of consignment or of origin

The following two tables show the value and percentage of Australian exports and imports during each of the years 1951-52, 1961-62 and 1971-72 according to principal country of consignment or origin. The proportions of Australian exports and imports by country of origin or consignment are shown graphically on plate 27 on page 295.

AUSTRALIAN EXPORTS AND IMPORTS, VALUE BY COUNTRY OF CONSIGNMENT  
OR ORIGIN, 1951-52, 1961-62, 1971-72  
(\$'000 f.o.b.)

Country	Exports			Imports		
	1951-52	1961-62	1971-72	1951-51	1961-62	1971-72
Arab Republic of Egypt . . . . .	17,952	7,060	86,878	4,316	116	88
Austria . . . . .	915	2,920	1,256	13,076	8,090	13,318
Bahrain . . . . .	578	858	10,285	26,135	644	23,391
Belgium-Luxembourg . . . . .	49,880	45,962	43,272	55,055	13,620	28,220
Brazil . . . . .	2,516	474	3,799	14,730	1,804	10,134
Canada . . . . .	18,354	35,048	139,117	27,118	68,317	138,149
China, People's Republic of . . . . .	575	131,912	37,257	6,164	7,622	41,318
Denmark . . . . .	2,139	1,266	3,128	2,394	5,048	12,773
Finland . . . . .	1,409	488	11,454	17,857	9,286	17,028
France . . . . .	115,750	104,112	127,900	44,780	22,170	69,136
Germany, Federal Republic of . . . . .	40,778	81,668	149,785	65,437	103,664	292,382
Greece . . . . .	2,023	2,140	26,694	183	752	4,580
Hong Kong . . . . .	7,601	40,564	100,386	4,509	12,836	68,121
India . . . . .	33,821	50,444	36,394	95,649	32,140	35,215
Indonesia . . . . .	7,933	7,096	57,209	51,060	53,020	14,312
Iran . . . . .	877	2,946	42,547	4,584	41,888	15,699
Iraq . . . . .	486	2,616	11,788	687	8,428	25,873
Italy . . . . .	75,997	104,360	89,391	55,424	28,056	87,368
Japan . . . . .	97,027	373,810	1,360,152	87,163	98,990	628,569
Korea, Republic of . . . . .	(a)	3,368	37,974	(a)	230	6,369
Kuwait . . . . .	(a)	2,468	13,537	(a)	22,434	33,621
Malaysia . . . . .	(a)	58,020	70,111	(a)	52,940	31,030
Nauru . . . . .	743	2,640	5,226	2,125	5,424	10,061
Netherlands . . . . .	22,706	20,302	56,215	29,950	26,284	66,816
New Caledonia . . . . .	2,829	5,586	22,201	158	770	589
New Zealand . . . . .	74,643	117,534	277,125	14,820	27,096	112,264
Norway . . . . .	400	4,306	13,888	23,300	6,664	11,312
Pakistan . . . . .	1,690	6,658	6,002	3,549	11,326	7,426
Papua New Guinea . . . . .	18,489	34,398	156,965	11,316	14,362	23,576
Philippines . . . . .	887	9,338	45,913	202	1,020	5,752
Poland . . . . .	10,016	18,936	21,517	1,714	850	2,801
Saudi Arabia . . . . .	(a)	2,334	15,383	(a)	24,082	20,010
Singapore . . . . .	23,621	(b)	118,463	17,528	(b)	38,437
South Africa, Republic of . . . . .	7,055	19,398	79,237	8,836	15,686	21,420
Spain . . . . .	1,690	27,250	15,339	5,714	4,902	19,314
Sri Lanka . . . . .	21,260	19,894	8,037	22,346	19,641	11,989
Sweden . . . . .	12,172	4,248	12,485	55,074	33,310	72,561
Switzerland . . . . .	8,649	3,084	5,671	14,001	27,522	73,611
Taiwan . . . . .		3,958	55,680		776	35,147
Thailand . . . . .	2,152	6,622	37,305	144	668	7,415
United Kingdom . . . . .	416,318	412,748	449,243	931,409	531,825	836,120
United States of America . . . . .	154,430	218,014	615,294	218,282	348,160	872,618
U.S.S.R. . . . .		23,534	82,825	1,334	1,700	1,836
Yugoslavia . . . . .	5,438	6,108	14,348	1,147	256	1,041
Other countries . . . . .	88,216	114,594	313,237	166,983	83,263	143,820
'For Orders' and Country of origin or destination unknown . . . . .		13,484	8,468	593	1,810	15,735
<b>Total . . . . .</b>	<b>1,350,015</b>	<b>2,154,568</b>	<b>4,896,381</b>	<b>2,106,846</b>	<b>1,779,492</b>	<b>4,008,365</b>

(a) Comparable figures not available. (b) Included with Malaysia.



**AUSTRALIAN EXPORTS AND IMPORTS, PROPORTIONS, BY COUNTRY OF CONSIGNMENT  
OR ORIGIN, 1951-52, 1961-62, 1971-72**

(Per cent)

Country	Exports			Imports		
	1951-52	1961-62	1971-72	1951-52	1961-62	1971-72
Arab Republic of Egypt . . . . .	1.33	0.33	1.77	0.20	0.01	0.00
Austria . . . . .	0.07	0.14	0.03	0.62	0.45	0.33
Bahrain . . . . .	0.04	0.04	0.21	1.24	0.04	0.58
Belgium-Luxembourg . . . . .	3.69	2.13	0.88	2.61	0.77	0.70
Brazil . . . . .	0.19	0.02	0.08	0.70	0.10	0.25
Canada . . . . .	1.36	1.63	2.84	1.29	3.84	3.45
China, People's Republic of . . . . .	0.04	6.12	0.76	0.29	0.43	1.03
Denmark . . . . .	0.16	0.06	0.06	0.11	0.28	0.32
Finland . . . . .	0.10	0.02	0.23	0.85	0.52	0.42
France . . . . .	8.57	4.83	2.61	2.13	1.25	1.72
Germany, Federal Republic of . . . . .	3.02	3.79	3.06	3.11	5.83	7.29
Greece . . . . .	0.15	0.10	0.55	0.01	0.04	0.11
Hong Kong . . . . .	0.56	1.88	2.05	0.21	0.72	1.70
India . . . . .	2.51	2.34	0.74	4.54	1.81	0.88
Indonesia . . . . .	0.59	0.33	1.17	2.42	2.98	0.36
Iran . . . . .	0.06	0.14	0.87	0.22	2.35	0.39
Iraq . . . . .	0.04	0.12	0.24	0.03	0.47	0.65
Italy . . . . .	5.63	4.84	1.83	2.63	1.58	2.18
Japan . . . . .	7.19	17.35	27.78	4.14	5.56	15.68
Korea, Republic of . . . . .	(a)	0.16	0.78	(a)	0.01	0.16
Kuwait . . . . .	(a)	0.11	0.28	(a)	1.26	0.84
Malaysia . . . . .	(a)	2.69	1.43	(a)	2.98	0.77
Nauru . . . . .	0.06	0.12	0.11	0.10	0.30	0.25
Netherlands . . . . .	1.68	0.94	1.15	1.42	1.48	1.67
New Caledonia . . . . .	0.21	0.26	0.45	0.01	0.04	0.01
New Zealand . . . . .	5.53	5.46	5.66	0.70	1.52	2.80
Norway . . . . .	0.03	0.20	0.28	1.11	0.37	0.28
Pakistan . . . . .	0.13	0.31	0.12	0.17	0.64	0.19
Papua New Guinea . . . . .	1.37	1.60	3.21	0.54	0.81	0.59
Philippines . . . . .	0.07	0.43	0.94	0.01	0.06	0.14
Poland . . . . .	0.74	0.88	0.44	0.08	0.05	0.07
Saudi Arabia . . . . .	(a)	0.11	0.31	(a)	1.35	0.50
Singapore . . . . .	1.75	(b)	2.42	0.83	(b)	0.96
South Africa, Republic of . . . . .	0.52	0.90	1.62	0.42	0.88	0.53
Spain . . . . .	0.13	1.26	0.31	0.27	0.28	0.48
Sri Lanka . . . . .	1.57	0.92	0.16	1.06	1.10	0.30
Sweden . . . . .	0.90	0.20	0.25	2.61	1.87	1.81
Switzerland . . . . .	0.64	0.14	0.12	0.66	1.55	1.84
Taiwan . . . . .	..	0.18	1.14	..	0.04	0.88
Thailand . . . . .	0.16	0.31	0.76	0.01	0.04	0.18
United Kingdom . . . . .	30.84	19.16	9.17	44.21	29.89	20.86
United States of America . . . . .	11.44	10.12	12.57	10.36	19.57	21.77
U.S.S.R. . . . .	..	1.09	1.69	0.06	0.10	0.05
Yugoslavia . . . . .	0.40	0.28	0.29	0.05	0.01	0.03
Other countries . . . . .	6.53	5.33	6.41	7.94	4.67	3.61
'For Orders' and Country of origin or destination unknown . . . . .	..	0.63	0.17	0.03	0.10	0.39
<b>Total . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

(a) Comparable figures not available.

(b) Included with Malaysia.

## Exports and Imports, by country of consignment and origin, and by description

The following table shows details of exports to and imports from principal countries, classified according to divisions of the Australian Export and Import Commodity Classifications, for the year 1971-72.

## EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1971-72

(\$'000 f.o.b.)

Division No.	Description	Arab Republic of Egypt		Belgium-Luxembourg		Canada	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	..	..	..	..	124	24
01	Meat and meat preparations . . . . .	..	..	542	..	36,522	244
02	Dairy products and eggs . . . . .	..	..	372	21	315	..
03	Fish and fish preparations . . . . .	..	..	62	1	762	1,910
04	Cereal grains and cereal preparations . . . . .	83,818	..	655	37	170	58
05	Fruit and vegetables . . . . .	1	7	533	339	10,521	540
06	Sugar and sugar preparations and honey . . . . .	..	..	18	4	36,663	59
07	Coffee, tea, cocoa, spices and manufactures thereof . . . . .	..	..	..	11	101	..
08	Feeding-stuff for animals (except unmilled cereals) . . . . .	..	..	..	..	37	..
09	Miscellaneous preparations chiefly for food . . . . .	..	5	2	12	26	232
11	Beverages . . . . .	1	..	..	1	1,596	112
12	Tobacco and tobacco manufactures . . . . .	..	..	..	18	..	61
21	Hides, skins and fur skins, undressed . . . . .	..	..	222	1	43	8
22	Oil-seeds, oil nuts and oil kernels . . . . .	..	..	..	..	..	435
23	Crude rubber (including synthetic and reclaimed) . . . . .	..	..	..	537	..	415
24	Wood, timber and cork . . . . .	..	..	314	9	19	16,133
25	Pulp and waste paper . . . . .	..	..	..	..	..	9,876
26	Textile fibres and their waste . . . . .	2,895	..	16,286	490	2,788	2,017
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones) . . . . .	..	..	4	52	..	12,063
28	Metalliferous ores and metal scrap . . . . .	45	..	14,096	61	17,529	1,416
29	Crude animal and vegetable materials, n.e.s. . . . .	..	..	194	48	740	312
32	Coal, coke and briquettes . . . . .	..	..	1,804	..	..	..
33	Petroleum and petroleum products . . . . .	..	8	..	78	58	89
34	Petroleum gases and other gaseous hydrocarbons . . . . .	(a)	..	(a)	..	(a)	..
41	Animal oils and fats . . . . .	..	..	73	..	40	..
42	Fixed vegetable oils and fats . . . . .	..	..	..	..	21	69
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin . . . . .	..	..	..	9	..	..
51	Chemical elements and compounds . . . . .	..	..	370	1,475	17,371	3,110
52	Mineral tar and crude chemicals from coal, petroleum and natural gas . . . . .	..	..	..	85	18	350
53	Dyeing, tanning and colouring materials . . . . .	..	..	11	365	169	387
54	Medicinal and pharmaceutical products . . . . .	..	..	..	..	..	..
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	..	..	6	99	6	237
56	Fertilisers, manufactured . . . . .	..	..	..	6	..	2,208
57	Explosives and pyrotechnic products . . . . .	..	..	31	45	..	138
58	Plastic materials, regenerated cellulose and artificial resins . . . . .	..	..	..	379	1	4,600
59	Chemical materials and products, n.e.s. . . . .	10	..	88	526	1,172	758
61	Leather, leather manufactures, n.e.s., and dressed fur skins . . . . .	..	..	2	68	119	15
62	Rubber manufactures, n.e.s. . . . .	..	..	3	257	71	995
63	Wood and cork manufactures (except furniture) . . . . .	..	..	3	12	2	183
64	Paper, paperboard and manufactures thereof . . . . .	..	..	5	1,104	21	21,954
65	Textile yarn, fabrics, made-up articles and related products . . . . .	..	62	11	3,810	512	4,761
66	Non-metallic mineral manufactures, n.e.s. . . . .	..	..	141	4,995	903	1,214
67	Iron and steel . . . . .	..	..	1,506	1,286	1,271	5,634
68	Non-ferrous metals . . . . .	32	..	1,743	227	538	3,572
69	Manufactures of metal, n.e.s. . . . .	..	..	250	1,208	1,546	4,481
71	Machinery (except electric) . . . . .	15	..	583	5,992	2,744	17,850
72	Electric machinery, apparatus and appliances . . . . .	3	..	222	1,641	403	5,809
73	Transport equipment . . . . .	37	..	2,806	77	476	3,729
81	Sanitary, plumbing, heating and lighting fixtures and fittings . . . . .	..	..	..	8	9	170
82	Furniture . . . . .	1	..	..	..	1	100
83	Travel goods, handbags and similar articles . . . . .	..	..	..	6	2	16
84	Clothing and clothing accessories; articles of knitted or crocheted fabric . . . . .	..	..	11	222	783	279
85	Footwear, gaiters, and similar articles and parts thereof . . . . .	..	..	..	9	2	35
86	Professional, scientific and controlling instruments; photographic and optical goods, watches and clocks . . . . .	..	3	91	1,167	824	2,897
89	Miscellaneous manufactured articles, n.e.s. . . . .	..	..	53	888	639	2,336
9A	Commodities and transactions of merchandise trade, not elsewhere classified(b) . . . . .	1	1	17	487	162	3,878
	Total merchandise . . . . .	86,860	87	43,131	28,175	137,842	137,772
9B	Commodities and transactions not included in merchandise trade . . . . .	18	1	141	45	1,275	377
	Grand total . . . . .	86,678	88	43,272	28,220	139,117	138,149

(a) Included in Division 9A.

(b) Includes Division 34 (Exports only).

EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
 AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1971-72—continued  
 (\$'000 f.o.b.)

Div. No.	China, People's Republic of		France		Germany, Federal Republic of		Hong Kong		India	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00	12	..	117	71	5	2	135	..	162	..
01	..	13	2,405	16	821	6	1,420	..	34	..
02	..	..	..	205	7	124	5,195	..	190	..
03	5	570	1,311	56	189	372	3,179	197	3	1,345
04	..	34	29	19	20,857	134	6,466	89	4,310	19
05	..	709	1,111	149	5,504	221	1,938	199	48	1,889
06	..	2	2,948	12	226	17	1,169	64	8	..
07	..	310	4	17	..	126	423	23	3	2,903
08	..	..	..	6	..	213	105	..	1	..
09	..	75	4	44	2	170	367	169	7	4
10	..	3	1	3,080	2	505	237	11	30	..
11	..	87	..	187	..	20	424	..	1	82
12	..	3	..	36	6,123	..	838	..	31	1
21	869	103	33,844	..	3,516	..	..	92	..	27
22	..	62	25	486	..	456	21	..	..	..
23	..	..	6	20	76	16	163	63	..	..
24	..	..	..	1	..	..	..	..	..	..
25	..	..	..	43	45,615	1,111	4,643	204	12,285	2,029
26	6,862	589	53,175	..	..	..	..	..	..	..
27	..	150	1	139	41	218	25	1	..	183
28	3,557	130	9,680	223	26,068	8	1,530	..	735	..
29	..	1,472	278	..	2,991	156	205	279	2	391
32	..	..	1	..	1,727	198	..	..	..	..
33	..	487	..	197	546	339	13	..	151	107
34	(a)	..	(a)	17	(a)	..	(a)	..	(a)	..
41	5,102	..	469	..	558	..	123	..	36	..
42	..	227	..	..	..	27	..	41	..	2
43	..	..	..	6	..	38	163	..	..	5
51	234	687	..	4,469	62	12,819	447	42	471	483
52	..	..	..	1	4	8	..	..	..	..
53	..	14	1	482	288	5,611	245	15	7	81
54	..	128	161	451	281	10,339	1,048	23	167	122
55	3	233	39	1,502	48	1,241	792	822	88	105
56	..	..	..	39	..	727	..	..	..	..
57	..	247	71	82	181	92	174	2	..	..
58	..	8	2	2,264	33	9,568	560	201	4	3
59	..	1,015	117	452	365	3,746	148	111	91	3
61	..	32	44	825	299	476	628	34	8	244
62	..	10	13	1,841	68	2,425	100	8	2	9
63	..	121	..	150	145	508	36	134	..	116
64	..	277	..	674	6	2,866	1,125	311	52	14
65	2	21,878	18	4,082	160	14,310	1,548	21,601	112	19,655
66	..	1,204	157	2,624	1,008	6,286	6,479	498	217	697
67	11,474	96	17	964	129	3,584	4,914	5	4,007	582
68	9,054	46	16,498	177	26,232	1,999	6,850	101	10,962	..
69	..	398	1,203	921	517	9,045	1,334	1,329	44	434
71	..	325	437	12,304	1,123	88,061	2,992	383	172	664
72	..	105	545	4,162	634	30,375	2,108	1,126	174	279
73	1	40	2,051	12,805	213	45,766	3,125	528	413	37
81	..	54	..	142	24	692	265	520	..	27
82	..	39	..	48	61	187	149	538	..	58
83	..	142	..	34	2	154	11	3,288	..	22
84	..	5,478	53	881	227	534	1,553	15,875	7	800
85	..	1,065	..	567	2	283	11	2,078	13	776
86	6	721	380	2,501	537	15,451	1,947	1,812	29	29
89	1	1,160	87	2,388	523	10,778	17,510	14,025	38	485
9A	..	769	96	5,485	728	7,706	1,320	1,086	78	480
	37,181	41,315	127,398	68,349	148,777	290,112	85,198	67,928	35,194	35,194
9B	76	3	502	787	1,008	2,270	15,188	193	1,200	21
	37,257	41,318	127,900	69,136	149,785	292,382	100,386	68,121	36,394	35,215

(a) Included in Division 9A.



EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1971-72—continued  
(\$'000 f.o.b.)

Division No.	Description	Indonesia		Italy		Japan	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	164	..	..	..	284	..
01	Meat and meat preparations . . . . .	128	..	1,022	101	78,428	16
02	Dairy products and eggs . . . . .	2,977	..	233	952	18,231	..
03	Fish and fish preparations . . . . .	8	7	116	15	21,287	10,981
04	Cereal grains and cereal preparations . . . . .	6,655	..	4,871	138	158,513	150
05	Fruit and vegetables . . . . .	311	..	548	1,342	2,672	325
06	Sugar and sugar preparations and honey . . . . .	68	..	..	39	62,199	160
07	Coffee, tea, cocoa, spices and manufactures thereof . . . . .	56	8,086	..	76	4,471	1,490
08	Feeding-stuff for animals (except unmilled cereals) . . . . .	24	..	..	1	7,326	..
09	Miscellaneous preparations chiefly for food . . . . .	152	1	..	107	58	338
11	Beverages . . . . .	164	..	3	1,182	40	33
12	Tobacco and tobacco manufactures . . . . .	77	10	..	5	..	..
21	Hides, skins and fur skins, undressed . . . . .	..	..	9,984	9	8,461	..
22	Oil-seeds, oil nuts and oil kernels . . . . .	..	..	1,785	..	3,978	..
23	Crude rubber (including synthetic and reclaimed) . . . . .	..	611	..	3	17	634
24	Wood, timber and cork . . . . .	..	624	..	2	37	45
25	Pulp and waste paper . . . . .	73	..	..	..	24	38
26	Textile fibres and their waste . . . . .	475	1	42,178	149	221,270	4,838
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones) . . . . .	90	1	16	538	8,187	1,291
28	Metalliferous ores and metal scrap . . . . .	44	..	12,444	..	424,873	401
29	Crude animal and vegetable materials, n.e.s. . . . .	7	42	665	153	4,256	323
32	Coal, coke and briquettes . . . . .	..	..	7,190	..	198,561	..
33	Petroleum and petroleum products . . . . .	798	4,400	1,061	37	4,768	715
34	Petroleum gases and other gaseous hydrocarbons . . . . .	(a)	..	(a)	..	(a)	..
41	Animal oils and fats . . . . .	63	..	96	..	9,937	57
42	Fixed vegetable oils and fats . . . . .	7	..	..	271	3	1,201
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin . . . . .	102	..	..	..	72	54
51	Chemical elements and compounds . . . . .	1,825	1	19	892	27,144	22,600
52	Mineral tar and crude chemicals from coal, petroleum and natural gas . . . . .	..	..	..	..	..	32
53	Dyeing, tanning and colouring materials . . . . .	346	..	10	193	283	838
54	Medicinal and pharmaceutical products . . . . .	678	16	31	409	1,009	1,660
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	343	49	42	432	1,826	370
56	Fertilisers, manufactured . . . . .	882	..	..	395	3	267
57	Explosives and pyrotechnic products . . . . .	7	..	106	81	26	121
58	Plastic materials, regenerated cellulose and artificial resins . . . . .	198	..	7	1,016	105	15,142
59	Chemical materials and products, n.e.s. . . . .	127	..	368	30	6,923	2,119
61	Leather, leather manufactures, n.e.s., and dressed fur skins . . . . .	5	1	5	394	397	530
62	Rubber manufactures, n.e.s. . . . .	424	..	7	1,401	38	14,535
63	Wood and cork manufactures (except furniture) . . . . .	55	30	8	617	7,550	1,542
64	Paper, paperboard and manufactures thereof . . . . .	558	..	1	1,615	83	9,983
65	Textile yarn, fabrics, made-up articles and related products . . . . .	246	39	16	7,991	1,267	106,135
66	Non-metallic mineral manufactures, n.e.s. . . . .	567	2	31	3,007	4,316	19,494
67	Iron and steel . . . . .	2,606	..	2,541	890	13,264	71,519
68	Non-ferrous metals . . . . .	3,608	..	1,799	166	32,092	2,059
69	Manufactures of metal, n.e.s. . . . .	2,266	22	217	2,205	2,389	17,209
71	Machinery (except electric) . . . . .	4,355	..	715	21,020	2,350	73,828
72	Electric machinery apparatus and appliances . . . . .	2,310	..	193	10,934	1,533	58,535
73	Transport equipment . . . . .	14,721	..	43	9,360	3,822	114,878
81	Sanitary, plumbing, heating and lighting fixtures and fittings . . . . .	107	..	..	655	41	548
82	Furniture . . . . .	27	4	..	781	31	910
83	Travel goods, handbags and similar articles . . . . .	..	..	..	268	29	1,453
84	Clothing and clothing accessories; articles of knitted or crocheted fabric . . . . .	74	12	52	1,711	254	2,306
85	Footwear, gaiters, and similar articles and parts thereof . . . . .	22	36	..	5,929	26	2,960
86	Professional, scientific and controlling instruments; photo- graphic and optical goods, watches and clocks . . . . .	593	1	133	2,965	950	18,305
89	Miscellaneous manufactured articles, n.e.s. . . . .	206	19	102	4,974	1,604	30,377
9A	Commodities and transactions of merchandise trade, not elsewhere classified(b) . . . . .	2,394	284	85	1,417	9,150	12,648
	Total merchandise . . . . .	51,996	14,302	88,745	86,871	1,356,461	626,190
9B	Commodities and transactions not included in merchandise trade . . . . .	5,213	10	646	497	3,691	2,379
	Grand total . . . . .	57,209	14,312	89,391	87,368	1,360,152	628,569

(a) Included in Division 9A.

(b) Includes Division 34 (Exports only).

EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1971-72—continued

(\$'000 f.o.b.)

Div. No.	Malaysia		Netherlands		New Zealand		Pakistan		Papua New Guinea	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00	173	..	..	..	998	4,328	34	..	148	..
01	1,234	..	1,051	..	65	151	2	..	10,192	..
02	5,723	..	31	647	115	1,116	36	..	2,171	..
03	137	1,654	42	653	109	2,969	..	244	398	639
04	18,074	1	2,837	316	2,882	2,073	1,896	22	9,517	..
05	1,005	125	1,606	358	4,981	4,135	6	..	1,725	1,311
06	1,151	..	65	162	12,868	1,234	1	..	2,640	..
07	1,113	1,068	..	938	396	243	..	1	748	8,840
08	801	..	1	53	21	51	2	..	935	..
09	203	13	2	117	161	422	1	..	830	..
11	127	..	1	140	499	109	5	..	2,754	4
12	11	..	..	4,855	97	23	..	..	1,932	109
21	263	..	1,560	..	473	283	..	..	..	25
22	..	32	879	17	362	23	..	..	1	2,916
23	7	9,877	2	213	618	3	..	..	19	2,162
24	..	11,831	52	1	1,151	4,620	..	..	31	2,074
25	143	19	..	..	3	8,479	..	..	7	..
26	6	12	13,389	1,086	1,082	6,905	1,844	2,378	225	..
27	..	..	..	..	..	..	..	..	..	..
28	268	..	353	29	956	65	..	1	132	1
29	4,407	87	7,009	..	112	1,711	8	..	102	336
32	210	162	620	148	762	1,881	..	99	191	18
33	14	..	7,310	1	2	..	..	..	2	..
34	865	..	9	242	16,884	239	..	485	2,512	..
41	(a)	..	(a)	..	(a)	..	(a)	..	(a)	..
42	926	..	639	..	6	88	282	..	324	..
43	1	2,381	302	8	54	..	..	..	88	1,247
51	82	..	10	628	37	19	6	..	29	..
52	1,014	82	991	2,854	17,069	653	89	..	554	..
53	7	..	..	5	9	..	..	..	5	1
54	416	..	68	435	2,717	151	4	1	450	..
55	1,046	8	146	1,264	11,726	1,151	13	..	706	..
56	890	26	5	259	1,308	636	..	1	1,618	..
57	12	..	..	39	56	15	..	..	51	..
58	248	..	26	..	1,034	10	..	..	394	..
59	365	5	5	1,848	3,620	478	5	..	1,022	..
61	197	7	7	1,499	2,531	328	1	15	528	153
62	55	509	12	732	270	332	..	28	13	..
63	29	825	2	70	950	437	13	..	1,425	..
64	2,185	5	5	1,603	754	397	..	1	270	2,308
65	360	694	33	3,796	2,586	20,188	164	..	3,180	..
66	503	..	71	716	12,087	15,967	6	3,130	875	..
67	2,137	..	737	742	2,018	1,457	21	1	1,891	3
68	4,150	333	13,670	179	18,252	94	591	..	4,897	..
69	2,062	42	355	699	21,730	223	55	..	776	14
71	4,299	20	444	8,431	8,761	2,775	112	53	7,013	42
72	2,402	32	721	8,294	21,660	4,152	259	4	21,380	9
73	2,354	9	91	15,027	12,014	8,149	72	..	10,760	11
81	162	2	9	110	56,908	3,807	164	..	11,396	14
82	59	7	6	121	270	249	..	3	606	1
83	2	..	..	16	80	568	..	2	767	..
84	..	..	..	..	27	504	..	2	57	..
85	404	3	97	20	431	2,061	6	297	1,147	22
86	8	135	..	65	113	229	..	109	527	..
89	398	3	199	3,342	6,327	451	33	207	2,188	21
9A	366	70	155	2,773	10,584	3,545	14	275	2,657	58
	1,508	924	120	1,154	2,438	1,714	7	65	28,142	343
	64,581	31,003	55,755	66,711	264,025	111,887	5,750	7,424	142,950	22,683
9B	5,530	27	460	105	13,100	377	252	2	14,015	893
	70,111	31,030	56,215	66,816	277,125	112,264	6,002	7,426	156,965	23,576

(a) Included in Division 9A.

EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1971-72—continued  
(\$'000 f.o.b.)

Division No.	Description	Philippines		Singapore		South Africa, Republic of	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	94	..	1,763	..	108	..
01	Meat and meat preparations . . . . .	476	..	5,700	3	152	..
02	Dairy products and eggs . . . . .	7,254	..	5,939	..	892	..
03	Fish and fish preparations . . . . .	2	9	831	565	1,355	3,442
04	Cereal grains and cereal preparations . . . . .	7,420	..	7,624	13	268	4
05	Fruit and vegetables . . . . .	87	471	6,875	17	201	452
06	Sugar and sugar preparations and honey . . . . .	6	..	1,893	..	1	10
07	Coffee, tea, cocoa, spices and manufactures thereof . . . . .	..	69	398	280	4	1
08	Feeding-stuff for animals (except unmilled cereals) . . . . .	539	..	1,467	7	1	1,357
09	Miscellaneous preparations chiefly for food . . . . .	25	..	448	72	98	95
11	Beverages . . . . .	6	5	552	1	9	6
12	Tobacco and tobacco manufactures . . . . .	..	365	344	..	..	998
21	Hides, skins and fur skins, undressed . . . . .	2	..	186	..	1,262	2
22	Oil-seeds, oil nuts and oil kernels . . . . .	..	..	..	..	..	10
23	Crude rubber (including synthetic and reclaimed) . . . . .	50	88	24	227	..	..
24	Wood, timber and cork . . . . .	1	2,011	2	138	147	..
25	Pulp and waste paper . . . . .	..	..	37	..	..	1
26	Textile fibres and their waste . . . . .	..	103	2	..	926	74
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones) . . . . .	203	..	161	6	13	4,175
28	Metalliferous ores and metal scrap . . . . .	234	229	1,054	1	1,884	17
29	Crude animal and vegetable materials, n.e.s. . . . .	5	52	333	104	659	132
32	Coal, coke and briquettes . . . . .	..	..	..	..	..	175
33	Petroleum and petroleum products . . . . .	629	..	4,775	29,572	2,866	24
34	Petroleum gases and other gaseous hydrocarbons . . . . .	(a)	..	(a)	..	(a)	..
41	Animal oils and fats . . . . .	652	..	1,101	..	3,539	66
42	Fixed vegetable oils and fats . . . . .	6	..	..	68	..	255
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin . . . . .	41	1	69	..	2	35
51	Chemical elements and compounds . . . . .	1,169	52	481	1	1,752	682
52	Mineral tar and crude chemicals from coal, petroleum and natural gas . . . . .	..	..	18	473	..	..
53	Dyeing, tanning and colouring materials . . . . .	357	..	1,033	..	87	468
54	Medicinal and pharmaceutical products . . . . .	889	26	868	4	730	2
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	59	..	971	3	249	36
56	Fertilisers, manufactured . . . . .	76	..	7	..	73	..
57	Explosives and pyrotechnic products . . . . .	..	31	3	..	7	..
58	Plastic materials, regenerated cellulose and artificial resins . . . . .	371	..	550	12	378	..
59	Chemical materials and products, n.e.s. . . . .	212	1	243	2	257	32
61	Leather, leather manufactures, n.e.s., and dressed fur skins . . . . .	104	1	1,181	2	289	9
62	Rubber manufactures, n.e.s. . . . .	118	36	191	110	447	156
63	Wood and cork manufactures (except furniture) . . . . .	18	1,065	70	495	119	230
64	Paper, paperboard and manufactures thereof . . . . .	121	10	1,961	66	838	180
65	Textile yarn, fabrics, made-up articles and related products . . . . .	410	369	815	1,005	634	249
66	Non-metallic mineral manufactures, n.e.s. . . . .	527	31	1,300	67	378	1,204
67	Iron and steel . . . . .	9,966	..	3,521	63	1,837	2,936
68	Non-ferrous metals . . . . .	4,435	..	3,705	..	1,478	115
69	Manufactures of metal, n.e.s. . . . .	1,750	..	2,976	78	3,395	718
71	Machinery (except electric) . . . . .	3,134	6	8,447	538	8,284	1,350
72	Electric machinery, apparatus and appliances . . . . .	624	..	2,725	360	2,854	178
73	Transport equipment . . . . .	1,178	5	17,403	1,106	34,247	56
81	Sanitary, plumbing, heating and lighting fixtures and fittings . . . . .	1	1	334	2	9	4
82	Furniture . . . . .	6	80	40	55	37	37
83	Travel goods, handbags and similar articles . . . . .	..	14	34	31	5	6
84	Clothing and clothing accessories; articles of knitted or crocheted fabric . . . . .	62	58	1,023	711	306	6
85	Footwear, gaiters, and similar articles and parts thereof . . . . .	..	34	114	85	2	..
86	Professional, scientific and controlling instruments; photo- graphic and optical goods, watches and clocks . . . . .	1,053	..	2,179	172	864	794
89	Miscellaneous manufactured articles, n.e.s. . . . .	533	397	1,351	1,593	4,329	117
9A	Commodities and transactions of merchandise trade, not elsewhere classified(b) . . . . .	129	105	4,654	273	133	416
	Total merchandise . . . . .	45,036	5,725	99,784	38,382	78,408	21,315
9B	Commodities and transactions not included in merchandise trade . . . . .	877	27	18,679	55	829	105
	Grand total . . . . .	45,913	5,752	118,463	38,437	79,237	21,420

(a) Included in Division 9A.

(b) Includes Division 34 (Exports only).



EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1971-72—continued

(\$'000 f.o.b.)

Div. No.	Sweden		Taiwan		United Kingdom		United States of America		U.S.S.R.	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00			186	..	46	1,000	1,022	56	..	..
01	3,195	..	355	8	73,837	534	284,064	26	10,459	..
02	..	83	4,872	1	14,187	148	1,347	160	..	..
03	17	16	2	70	2,395	7,801	40,387	1,337	..	280
04	1	270	24,097	2	40,920	1,530	375	99	28,766	..
05	2,689	19	59	1,305	38,389	914	3,860	4,467	..	..
06	45	1	..	..	45,222	861	36,655	79	13,367	3
07	..	1	45	45	2	1,397	182	417	..	..
08	..	..	105	1	65	33	186	2,816	..	..
09	44	13	12	121	222	3,644	474	748	..	..
11	1	1	7	..	1,189	11,863	207	760	..	8
12	..	20	..	37	2	1,782	6	14,498	..	..
21	645	11	689	..	2,277	116	917	229	..	84
22	..	..	..	..	22	197	..	299	..	..
23	1	..	..	..	33	898	240	5,864	..	..
24	23	21	2	125	2,537	73	131	11,316	..	..
25	..	3,573	..	..	..	2	1	6,219	..	..
26	96	1,476	12,800	73	32,541	4,478	13,298	6,447	29,860	..
27	..	61	162	..	200	2,047	602	4,724	..	1
28	440	..	752	..	30,149	71	39,114	188	..	..
29	85	..	36	28	1,957	2,519	2,617	2,965	..	..
32	..	..	175	..	14,916	2	43	84	..	..
33	72	7	27	..	5,131	1,930	7,790	9,297	..	12
34	..	2	(a)	..	(a)	..	(a)	19	(a)	..
41	8	..	2,463	..	1,217	73	583	33	..	..
42	..	23	..	..	..	37	..	2,513	..	..
43	..	..	..	..	..	..	..	..	..	..
51	23	451	186	..	64	507	2	554	..	..
52	..	..	799	267	1,098	26,072	67,621	48,543	..	581
53	13	16	382	..	..	199	..	1,850	..	..
54	3	675	15	..	218	8,890	315	4,165	..	..
55	..	..	..	..	1,196	18,023	330	11,093	..	46
56	..	14	55	14	182	5,437	220	4,485	..	5
57	35	7	..	..	..	16	136	2,061	..	..
58	..	27	..	73	62	1,346	23	1,555	..	..
59	..	315	172	416	675	30,775	428	27,008	..	..
61	7	352	159	3	3,703	16,496	12,844	24,581	..	..
62	22	6	21	33	1,453	3,113	206	661	..	1
63	4	347	7	949	202	17,440	2,874	10,577	..	..
64	4	423	7	4,087	424	1,253	110	197	..	1
65	10	6,173	11	33	112	12,167	482	20,133	..	..
66	2	965	27	10,068	478	42,393	1,126	19,078	..	75
67	3	619	125	1,060	1,260	22,094	3,691	12,168	8	14
68	103	3,995	1,794	214	862	16,981	11,324	7,662	..	..
69	2,639	264	3,959	11	87,563	8,839	26,330	3,452	..	116
71	249	4,076	144	708	3,829	30,340	3,596	20,837	..	..
72	705	23,041	508	413	7,925	199,158	11,413	233,214	42	272
73	630	9,654	91	1,750	4,224	78,735	2,305	59,484	..	15
81	29	11,612	166	860	6,101	111,801	9,439	132,787	..	100
82	..	134	..	97	29	2,266	19	704	..	1
83	1	39	..	524	43	1,548	40	374	..	..
84	..	33	..	564	30	479	27	73	..	..
85	104	89	19	4,805	1,321	7,465	1,215	2,986	..	..
86	7	348	..	3,507	12	3,372	82	77	..	..
89	124	718	90	188	4,169	34,156	3,401	36,914	267	81
9A	42	532	52	2,001	4,344	62,226	5,053	48,269	40	73
	208	1,671	21	663	1,436	23,110	4,319	50,734	1	58
	12,331	72,195	55,657	35,123	440,470	830,650	603,071	861,936	82,810	1,827
9B	154	366	23	24	8,773	5,470	12,223	10,682	15	9
	12,485	72,561	55,680	35,147	449,243	836,120	615,294	872,618	82,825	1,836

(a) Included in Division 9A.

NOTE. For description of Division Nos. see previous page.

### Trade with major groups of countries

Australia's trade with major groups of countries is shown in the following table. Particulars of Australia's balance of payments with countries in these groups are shown on pages 325-6.

#### TRADE OF AUSTRALIA, BY MAJOR GROUPS OF COUNTRIES

1969-70 TO 1971-72

(\$'000 f.o.b.)

	1969-70	1970-71	1971-72
<b>STERLING AREA</b>			
Exports to—			
United Kingdom . . . . .	489,093	493,847	449,243
Other countries . . . . .	851,501	943,221	1,003,356
Total . . . . .	1,340,594	1,437,068	1,452,599
Imports from—			
United Kingdom . . . . .	845,344	887,168	836,120
Other countries . . . . .	494,297	472,892	501,133
Total . . . . .	1,339,641	1,360,060	1,337,253
Excess of exports (+) or imports (–) . . . . .	+953	+77,008	+115,346
<b>NON-STERLING COUNTRIES—NORTH AMERICA</b>			
Exports to—			
Canada . . . . .	112,773	105,984	139,117
United States of America(a) . . . . .	570,393	530,859	632,287
Total . . . . .	683,166	636,843	771,404
Imports from—			
Canada . . . . .	151,031	166,581	138,149
United States of America(a) . . . . .	965,867	1,043,155	874,519
Total . . . . .	1,116,898	1,209,736	1,012,668
Excess of exports (+) or imports (–) . . . . .	–433,732	–572,893	–241,264
<b>OTHER NON-STERLING COUNTRIES</b>			
Exports to—			
European Economic Community . . . . .	498,328	465,742	547,788
European Free Trade Association(b) . . . . .	47,836	47,806	58,865
Other countries—			
Japan . . . . .	1,025,341	1,190,858	1,360,152
Eastern Europe, China, People's Rep. etc. . . . .	217,689	167,638	171,090
Other . . . . .	324,265	429,801	534,583
Total . . . . .	2,113,459	2,301,845	2,672,378
Imports from—			
European Economic Community . . . . .	521,028	573,889	564,789
European Free Trade Association(b) . . . . .	169,695	199,622	207,302
Other countries—			
Japan . . . . .	481,203	573,581	628,569
Eastern Europe, China, People's Rep. etc. . . . .	54,162	57,659	63,686
Other . . . . .	198,600	175,481	194,097
Total . . . . .	1,424,688	1,580,232	1,658,443
Excess of exports, (+) or imports (–) . . . . .	+688,771	+721,613	+1,013,935
<b>ALL GROUPS</b>			
Total exports . . . . .	4,137,222	4,375,757	4,896,381
Total imports . . . . .	3,881,227	4,150,028	4,008,365
Excess of exports (+) or imports (–) . . . . .	+255,995	+225,729	+888,016

(a) Includes United States of America, Territories and Dependencies. (b) Other than United Kingdom.

Countries constituting the several groups are listed below.

<b>STERLING AREA—</b>	Trucial States	Nigeria	<b>OTHER—</b>
Antarctica	Union of Arab Emirates	Polynesia (French)	Afghanistan
Bahama Is	United Kingdom	Reunion Is	Algeria
Bahrain	Virgin Is (British)	Rwanda	Arab Republic of Egypt
Bangladesh	Western Samoa	St Pierre and	Argentina
Barbados	Windward Is	Miquelon	Bhutan
Bermuda	Yemen, People's Republic	Senegal	Bolivia
Botswana	of	Somalia	Brazil
British Indian Ocean	Zambia	Surinam	Burma
Territory		Tanzania	Chile
Brunei		Togo	Colombia
Christmas Is		Tunisia	Costa Rica
Cocos Is	<b>NON-STERLING</b>	Turkey	Cuba
Cook Is	<b>COUNTRIES—</b>	Uganda	Dominican Republic
Cyprus	<b>NORTH AMERICA—</b>	Upper Volta	Ecuador
Falkland Is	Canada	Wallis and Futuna Is	El Salvador
Fiji	United States of	West Indies (French)	Equatorial Guinea,
Gambia	America and		Republic of, previously
Ghana	Dependencies		included with Spanish
Gibraltar	(Guam, Okinawa,		Equatorial (West) Africa
Gilbert and Ellice Is	Puerto Rico, Samoa,		Ethiopia
Guyana	Virgin Is and		Guatemala
Honduras (British)	other U.S. Pacific Is)		Guinea
Hong Kong		<b>EUROPEAN FREE TRADE</b>	Haiti
India		<b>ASSOCIATION(a)—</b>	Honduras (not British)
Ireland		Angola	Indonesia
Jamaica	<b>EUROPEAN ECONOMIC</b>	Austria	Iran
Jordan	<b>COMMUNITY—</b>	Cape Verde Is	Iraq
Kuwait	Antilles (Netherlands)	Denmark	Israel
Leeward Is	Belgium-Luxembourg	Finland	Japan
Lesotho	Burundi	Guinea (Portuguese)	Khmer, Republic of
Libya	Cameroon	Iceland	Korea, Republic of
Malawi	Central African	Macao	Laos
Malaysia	Republic	Mozambique	Lebanon
Maldives Is	Chad	Norway	Liberia
Malta	Congo (Brazzaville)	Portugal	Mexico
Mauritius	Congo (Kinshasa)	Sao Tome and Principe	Nepal
Nauru, Republic of	Dahomey	Sweden	New Hebrides
New Zealand	France	Switzerland	Nicaragua
Niue and Tokelau Is	French Territory of	Timor	Panama
Norfolk Is	the Afar and Issa		Paraguay
Oman	Peoples formerly		Peru
Pakistan	Somaliland (French)	<b>EASTERN EUROPE, CHINA,</b>	Philippines
Papua New Guinea	Gabon	<b>PEOPLE'S REPUBLIC OF,</b>	Rhodesia
Qatar	Germany, Federal	<b>ETC.—</b>	Saudi Arabia
Ross Dependency	Republic of	Albania	Spain
St Helena and	Greece	Bulgaria	Spanish Sahara, previously
Ascension	Guiana (French)	China, People's Republic	included with Spanish
Seychelles	Italy	of	Equatorial (West) Africa
Sierra Leone	Ivory Coast	Czechoslovakia	Sudan
Singapore	Kenya	Germany (East)	Syria
Solomon Is	Malagasy, Republic of	Hungary	Taiwan
South Africa, Republic of	Mali	Korea (North)	Thailand
South West Africa	Mauritania	Mongolia	Uruguay
Sri Lanka	Morocco	Poland	Venezuela
Swaziland	Netherlands	Romania	Vietnam, Republic of
Tonga	New Caledonia	U.S.S.R.	Yemen
Trinidad and Tobago	Niger	Vietnam (North)	Yugoslavia

(a) Other than United Kingdom.

## Trade with eastern countries

Details of exports to and imports from eastern countries are shown in the following table. Further information for principal eastern countries, by divisions of the Australian Export and Import Commodity Classifications, is shown in the tables on pages 303-8.



TRADE OF AUSTRALIA WITH EASTERN COUNTRIES, BY COUNTRY OF CONSIGNMENT  
OR ORIGIN, 1969-70 TO 1971-72  
(\$'000 f.o.b.)

Country	Exports			Imports		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Bangladesh . . . . .	(a)	(a)	1,743	(a)	(a)	946
Bhutan . . . . .	..	..	1	..	..	..
Brunei . . . . .	8,700	1,121	1,359	14,452	7,061	2,995
Burma . . . . .	3,802	2,771	3,709	295	231	240
China, People's Republic of . . . . .	125,815	63,277	37,257	32,082	31,584	41,318
Hong Kong . . . . .	84,718	90,403	100,386	54,022	61,116	68,121
India . . . . .	40,237	38,031	36,394	31,839	32,230	35,215
Indonesia . . . . .	35,266	39,076	57,209	48,882	22,523	14,312
Japan . . . . .	1,025,341	1,190,858	1,360,152	481,203	573,581	628,569
Khmer, Republic of . . . . .	832	1,700	4,431	35	47	106
Korea (North) . . . . .	3,688	1,634	2,623	2	..	15
Korea, Republic of . . . . .	12,371	9,685	37,974	2,183	5,762	6,369
Laos . . . . .	126	274	235	..	..	..
Macao . . . . .	23	..	20	29	42	36
Malaysia . . . . .	68,525	66,494	70,111	34,922	32,740	31,030
Nepal . . . . .	44	802	150	23	10	33
Pakistan . . . . .	16,394	16,112	6,002	18,953	14,552	7,426
Philippines . . . . .	55,890	40,935	45,913	4,294	4,962	5,752
Singapore . . . . .	98,469	118,397	118,463	14,031	23,303	38,437
Sri Lanka . . . . .	14,718	14,199	8,037	11,321	12,073	11,989
Taiwan . . . . .	29,912	40,009	55,680	15,869	22,854	35,147
Thailand . . . . .	29,117	32,290	37,305	2,687	3,918	7,415
Timor . . . . .	554	539	964	4	..	..
Vietnam (North) . . . . .	..	..	..	..	..	..
Vietnam, Republic of . . . . .	23,193	15,117	8,017	30	98	13
Total . . . . .	1,677,735	1,783,724	1,994,135	767,158	848,687	935,484

(a) Included with Pakistan.

## Ships' and aircraft stores

Ships' and aircraft stores loaded on overseas ships and aircraft are excluded from exports. The value of these stores is shown in the table below for each of the years 1969-70 to 1971-72.

STORES LOADED ON BOARD OVERSEAS VESSELS AND  
AIRCRAFT: AUSTRALIA, 1969-70 TO 1971-72  
(\$A'000 f.o.b.)

Stores	1969-70	1970-71	1971-72
Cigarettes, cigars and tobacco . . . . .	774	694	865
Fuel, lubricating oil and lubricants . . . . .	34,745	43,183	43,582
Foodstuffs for human consumption—			
Meats . . . . .	2,277	2,493	2,032
Sugar . . . . .	51	45	45
Milk and cream, preserved . . . . .	68	68	70
Butter . . . . .	169	165	218
Cheese . . . . .	68	84	55
Eggs in shell . . . . .	353	314	264
Seafoods . . . . .	623	693	540
Prepared grains . . . . .	158	167	140
Vegetables . . . . .	666	841	640
Fruit . . . . .	445	491	427
Tea . . . . .	11	11	19
Other . . . . .	711	689	821
Fodder . . . . .	45	47	33
Alcoholic beverages . . . . .	1,839	2,077	2,177
Coal . . . . .	33	7	1
Other ships' stores . . . . .	7,272	7,686	7,187
Total . . . . .	50,308	59,755	59,116

## Overseas trade at customs ports

The following table shows the value of exports and imports at customs ports of Australia during the year 1971-72, and the totals for each State and Territory.

OVERSEAS TRADE: CUSTOMS PORTS, AUSTRALIA, 1971-72  
(\$'000 f.o.b.)

Port or customs station	Exports	Imports	Port or customs station	Exports	Imports
New South Wales—			South Australia— <i>continued</i>		
Sydney . . . . .	791,104	1,458,428	Port Wallaroo . . . . .	18,549	618
Botany Bay (Kurnell) . . . . .	8,592	32,854	Whyalla . . . . .	19,998	3,039
Byron Bay . . . . .	..	..	Woomera . . . . .	54	19
Coff's Harbour (including Ballina) . . . . .	..	..	Parcels Post, Adelaide . . . . .	(a)	2,762
Grafton (including Yamba) . . . . .	..	..	<i>Total South Australia</i> . . . . .	394,064	189,748
Kingsford-Smith Airport . . . . .	130,005	173,091			
Newcastle (including Port Stephens) . . . . .	189,803	36,509	Western Australia—		
Port Kembla . . . . .	84,142	42,202	Fremantle . . . . .	428,156	167,942
Richmond . . . . .	1,292	4,775	Albany . . . . .	43,005	1,746
Twofold Bay (including Eden) . . . . .	(a)	(a)	Barrow Island . . . . .	1,763	..
Parcels post, Sydney . . . . .	(a)	16,911	Broome . . . . .	5,006	5,080
<i>Total New South Wales</i> . . . . .	1,204,938	1,764,770	Bunbury . . . . .	19,733	1,983
			Busselton . . . . .	212	..
Victoria—			Cape Cuvier . . . . .	3,606	..
Melbourne . . . . .	925,775	1,244,189	Carnarvon . . . . .	63	156
Geelong . . . . .	131,125	45,567	Derby . . . . .	2,551	599
Melbourne Airport . . . . .	31,027	104,495	Esperance . . . . .	42,651	1,411
Portland . . . . .	33,375	15,109	Exmouth (North West Cape) . . . . .	319	600
Westernport . . . . .	18,429	7,656	Geraldton . . . . .	40,715	1,156
Parcels Post, Melbourne . . . . .	(a)	14,060	Dampier (King Bay) . . . . .	150,711	29,124
<i>Total Victoria</i> . . . . .	1,139,731	1,431,076	Kwinana . . . . .	6,215	43,060
			Perth . . . . .	753	3
Queensland—			Perth Airport . . . . .	7,711	11,806
Brisbane . . . . .	385,754	219,024	Onslow . . . . .	..	..
Bowen . . . . .	8,193	146	Port Walcott (including Point Samson) . . . . .	..	4,644
Brisbane Airport . . . . .	14,569	12,428	Port Hedland . . . . .	180,221	11,524
Bundaberg . . . . .	35,101	24	Useless Loop . . . . .	754	..
Cairns (including Cairns Airport) . . . . .	37,176	4,620	Wyndham . . . . .	4,622	307
Cape Flattery . . . . .	307	..	Yampi Sound (Cockatoo Island) . . . . .	7,747	..
Gladstone . . . . .	152,265	10,122	Parcels Post, Perth . . . . .	(a)	2,122
Hay Point . . . . .	27,868	..	<i>Total Western Australia</i> . . . . .	946,504	283,263
Innisfail . . . . .	41,794	1			
Mackay . . . . .	64,685	10,955	Tasmania—		
Maryborough (including Urangan) . . . . .	9	114	Hobart (including Cambridge Airport and Hobart Alighting Area) . . . . .	66,317	19,881
Rockhampton (including airport and Port Alma) . . . . .	35,151	698	Burnie (including Wynyard Airport) . . . . .	47,856	8,990
Thursday Island . . . . .	1,087	1,250	Devonport (including Devonport Airport and Ulverstone) . . . . .	10,274	3,129
Townsville (including airport) . . . . .	176,995	7,275	Launceston (including Launceston Airport and Beauty Point) . . . . .	37,524	7,749
Weipa . . . . .	(a)	1,855	Port Latta . . . . .	16,979	..
Parcels Post, Brisbane . . . . .	(a)	1,972	Port Stanley . . . . .	..	..
<i>Total Queensland</i> . . . . .	980,954	270,484	Spring Bay . . . . .	(a)	..
			Parcels Post . . . . .	(b)	..
South Australia—			<i>Total Tasmania</i> . . . . .	178,950	39,749
Port Adelaide (including Stenhouse Bay) . . . . .	219,276	153,213			
Adelaide Airport . . . . .	12,686	7,537	Northern Territory—		
Adelaide City . . . . .	..	..	Darwin (including Darwin Airport, Groote Eylandt and Gove) . . . . .	49,243	25,866
Ardrossan . . . . .	6,332	..			
Cape Thevenard . . . . .	10,948	..	Australian Capital Territory—		
Edithburgh . . . . .	..	..	Canberra . . . . .	1,998	3,410
Port Augusta . . . . .	1,970	..	<i>Grand Total</i> . . . . .	4,896,381	4,008,365
Port Giles . . . . .	1,420	..			
Port Lincoln . . . . .	29,012	1,109			
Port Pirie (including Port Germein) . . . . .	73,299	1,414			
Port Stanvac . . . . .	520	20,037			

(a) Included with main port.

(b) Included with respective port.

**Movement of bullion and specie**

The following table shows the values of gold and silver bullion and specie, and of bronze specie, exported from and imported into Australia during each of the years 1969-70 to 1971-72.

**EXPORTS AND IMPORTS OF BULLION AND SPECIE: AUSTRALIA, 1969-70 TO 1971-72**  
(*\$'000 f.o.b.*)

	<i>Exports</i>			<i>Imports</i>		
	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Gold—Bullion(a) . . .	29,367	18,199	17,017	6,709	3,620	3,967
Specie . . .	6	46	2,350	40	66	107
<i>Total gold</i> . . .	<i>29,373</i>	<i>18,245</i>	<i>19,367</i>	<i>6,749</i>	<i>3,686</i>	<i>4,074</i>
Silver—Bullion(a) . . .	14,006	12,380	9,174	156	108	54
Specie . . .	81	46	54	162	37	25
<i>Total silver</i> . . .	<i>14,087</i>	<i>12,426</i>	<i>9,228</i>	<i>318</i>	<i>145</i>	<i>79</i>
Other (including bronze and cupro-nickel)—Specie . .	1,255	586	416	1,320	92	58
Total—						
Australian Produce . . .	44,688	31,243	28,920	..	..	..
Re-exports . . .	27	14	91	..	..	..
<b>Grand total</b> . . .	<b>44,715</b>	<b>31,257</b>	<b>29,011</b>	<b>8,387</b>	<b>3,923</b>	<b>4,211</b>

(a) Includes matte.

The following table shows the exports and imports of bullion and specie to and from various countries during the year 1971-72.

**EXPORTS AND IMPORTS OF BULLION AND SPECIE, BY COUNTRY OF CONSIGNMENT OR ORIGIN, 1971-72**  
(*\$'000 f.o.b.*)

<i>Country</i>	<i>Exports</i>			<i>Imports</i>		
	<i>Bullion</i>	<i>Specie</i>	<i>Total</i>	<i>Bullion</i>	<i>Specie</i>	<i>Total</i>
Fiji . . . . .	23	1	24	3,162	..	3,162
Germany, Federal Republic of . . .	7	..	7	..	1	1
Hong Kong . . . . .	13,896	..	13,896	..	1	1
Japan . . . . .	2,360	..	2,360	..	..	..
Malaysia . . . . .	63	1,969	2,032	..	..	..
New Zealand . . . . .	593	105	698	61	3	64
Papua New Guinea . . . . .	4	321	325	777	..	777
Singapore . . . . .	2,520	379	2,899	..	1	1
Solomon Islands . . . . .	..	17	17	..	..	..
Switzerland . . . . .	..	..	..	..	86	86
United Kingdom . . . . .	6,562	11	6,573	10	17	27
United States of America . . . . .	..	2	2	11	5	16
Other Countries . . . . .	163	15	178	..	14	14
Australia re-imported . . . . .	..	..	..	..	62	62
<b>Total</b> . . . . .	<b>26,191</b>	<b>2,820</b>	<b>29,011</b>	<b>4,021</b>	<b>190</b>	<b>4,211</b>



### Total import clearances, dutiable clearances, and net customs duties collected

The following table shows the value of total import clearances, total dutiable clearances, and the net customs duties collected during each of the years 1967-68 to 1971-72 together with the ratio of total dutiable clearances to total clearances.

#### TOTAL IMPORT CLEARANCES, DUTIABLE CLEARANCES, AND NET CUSTOMS DUTIES 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
Total import clearances . . . \$'000	3,265,116	3,432,209	3,858,808	4,103,786	3,976,345
Total dutiable clearances . . . „	1,371,780	1,508,391	1,779,110	2,005,478	1,929,319
Total net customs duties collected . . „	306,590	340,940	407,432	458,908	462,671
Ratio of dutiable clearances to total clearances . . . per cent	42.0	43.9	46.1	48.9	48.5
Ratio of duties collected to dutiable clearances . . . „	22.3	22.6	22.9	22.9	24.0

### Overseas trade in calendar years

For the purpose of comparison with countries which record overseas trade in calendar years, the following table has been compiled to show estimates of Australian exports and imports for each of the calendar years 1968 to 1972.

#### OVERSEAS TRADE IN CALENDAR YEARS, AUSTRALIA, 1968 TO 1972 (\$'000 f.o.b.)

Year	Merchandise		Non-merchandise		Total	
	Exports	Imports	Exports	Imports	Exports	Imports
1968 . .	3,036,221	3,443,943	112,227	45,143	3,148,448	3,489,086
1969 . .	3,615,710	3,573,713	155,469	52,800	3,771,179	3,626,513
1970 . .	4,129,782	3,999,393	129,616	56,529	4,259,398	4,055,922
1971 . .	4,471,998	4,085,975	126,825	53,149	4,598,823	4,139,124
1972 . .	5,303,919	3,826,249	128,185	50,809	5,432,104	3,877,058

## Excise

Although excise goods have no immediate bearing on overseas trade, the rate of excise duty is in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Department of Customs and Excise, it is convenient to publish here the quantities of Australian produce on which excise duty has been paid. Particulars of customs and excise revenue are shown in the chapter Public Authorities Finance. The following table shows the quantities of spirits, beer, tobacco, etc., on which excise duty was paid in Australia during the years 1970-71 and 1971-72.

QUANTITY OF SPIRITS, BEER, TOBACCO, ETC. ON WHICH EXCISE DUTY  
WAS PAID: AUSTRALIA, 1970-71 AND 1971-72

Article	1970-71	1971-72	Article	1970-71	1971-72
	'000 gallons	'000 gallons		'000 gallons	'000 gallons
Beer . . . . .	336,607	350,618	Petrol—		
	'000 proof gallons	'000 proof gallons	Aviation gasoline (by-law)(b) . . . . .	9,251	12,407
Spirits—			Aviation gasoline—Other(b) . . . . .	77	444
Brandy . . . . .	1,181	1,250	Gasoline(b) . . . . .	2,147,253	2,404,417
Gin . . . . .	265	260	Total petrol . . . . .	2,156,581	2,417,268
Whisky . . . . .	355	383	Mineral turpentine . . . . .	..	3
Rum . . . . .	514	532	Aviation turbine kerosene(b) . . . . .	156,861	165,713
Liqueurs . . . . .	101	114	Other kerosene . . . . .	..	..
Vodka . . . . .	173	178	Diesel fuel (as defined by By-law) . . . . .	207,567	225,134
Flavoured spirituous liquors . . . . .	46	67		doz packs	doz packs
Other . . . . .	..	1		'000	'000
Total spirits (potable) . . . . .	2,635	2,785	Playing cards . . . . .	136	149
				60 papers	60 papers
Spirits for—				or tubes	or tubes
Fortifying wine(a) . . . . .	644	..		'000	'000
			Cigarette papers and tubes . . . . .	59,224	62,628
Tobacco . . . . .	'000 lb	'000 lb		8,640	8,640
	6,505	6,513		matches	matches
				'000	'000
Cigars . . . . .	160	208	Matches . . . . .	3,513	3,876
				'000 gal	'000 gal
			Grapewine for commercial purposes . . . . .	(c)18,498	(c)23,980
				'000 tons	'000 tons
			Coal . . . . .	37,499	41,011
				'000 doz	'000 doz
Cigarettes—machine-made . . . . .	56,012	57,465	Canned fruit . . . . .	containers	containers
				7,718	6,976

(a) Excise duty paid up to 19 August 1970. (b) Includes supplies to Commonwealth Government on which excise was paid. During the years 1970-71 and 1971-72 refunds were made on 62,283,000 gallons and 61,181,000 gallons, respectively. (c) Excise duty collected from 19 August 1970.

## PRIVATE OVERSEAS INVESTMENT

Surveys of overseas investment have been conducted since 1947-48 to obtain particulars of certain types of private capital flows to and from Australia. The surveys, when supplemented by other information, provide statistics of overseas investment in companies in Australia and in Australian public authority securities repayable in Australian currency, as well as statistics of Australian investment in companies overseas and in foreign government securities. Particulars of investment income from most of those classes of investment are also obtained from the surveys.

Certain types of private overseas investment are not included in the statistics which follow. Investment in real estate (except when made through companies) and loans between Australian individuals and non-resident individuals are not covered. Nor are changes in short-term liabilities between exporters and importers in Australia and overseas covered, except in so far as they arise from exports and imports between branches or subsidiaries and their home offices. In this case they are included in the figures of investment in branches or subsidiaries.

In the tables which classify investment in Australia according to country of origin, the investment is shown as an inflow from the country which is the immediate source of the capital. Income payable overseas is classified on a similar basis, i.e. it is classified to the country to which it is directly payable.

Remittances between Australia and overseas by Australian life insurance companies are regarded as capital transactions made to bring assets located in overseas countries into line with commitments in those countries, and are included as a flow of investment between Australia and overseas. Similar considerations apply to overseas life insurance companies with branches in Australia.

The following are explanatory notes relating to some of the terms used in the tables.

*Overseas.* For the purpose of these statistics, Papua New Guinea and the other external territories under the control of Australia are regarded as overseas countries.

*Companies.* In these statistics the term 'companies' relates to both incorporated and unincorporated businesses.

*Australian branches.* Australian branches of companies incorporated overseas whose net liabilities to home office or whose net profit or loss exceeds \$10,000, or which maintain in Australia a branch register of shares, debentures or unsecured notes.

*Australian subsidiaries.* For the purpose of these statistics an Australian subsidiary is a company in which there is ownership of 25 per cent or more of the company's ordinary shares (or voting stock) by one company or a group of associated companies in one overseas country, or ownership of 50 per cent or more of the company's ordinary shares (or voting stock) by individual persons or individual companies in one overseas country.

*Direct investment.* For the purpose of these statistics direct investment is overseas investment made through a branch or subsidiary (as defined above) by the overseas persons or overseas companies which hold the specified proportions of ordinary shares (or voting stock) in the subsidiary.

*Portfolio investment and institutional loans.* This term relates to investment other than direct investment, including loans raised overseas from financial institutions and other companies which have no direct investment in the borrowing company.

*Undistributed profits.* This term refers, in the case of Australian subsidiaries, to the equity of the overseas parent in the net earnings for taxation purposes of the Australian company, less tax (or tax provision) and less dividends declared. In the case of overseas subsidiaries of Australian companies, this term represents the equity of the Australian parent in the book value of the net earnings of the subsidiary after tax, less dividends paid or payable.

*Unremitted profits.* For these statistics this represents the net earnings of branches during the year, after tax, less remittances by the branches to their home offices during the year of net earnings (irrespective of the period to which the earnings relate). 'Net earnings' of Australian branches of overseas companies are, in general, based on the value of their income for taxation purposes.

The annual bulletin *Insurance and Other Private Finance* (5.15) and the *Annual Bulletin of Overseas Investment* (5.20) contain additional figures relating to overseas investment, including a longer range of years covered, and also a more detailed description of the figures.

**Private overseas investment in companies in Australia and investment income payable overseas by companies in Australia.**

The inflow of private overseas investment in Australia since 1967-68 is shown in the next three tables.

**INFLOW OF OVERSEAS INVESTMENT IN COMPANIES IN AUSTRALIA  
BY CATEGORY OF INVESTMENT, 1967-68 TO 1971-72**  
(\$ million)

Year	Direct investment						Grand total
	Australian branches		Australian subsidiaries		Portfolio investment and institutional loans		
	Un-remitted profits (net)	Other direct investment	Un-distributed profits (net)	Other direct investment			
1967-68 .	34	110	194	222	560	402	962
1968-69 .	34	148	247	200	630	405	1,035
1969-70 .	41	149	244	358	791	279	1,070
1970-71 .	52	142	247	514	956	655	1,611
1971-72 .	71	117	240	483	911	588	1,499



**INFLOW OF OVERSEAS INVESTMENT IN COMPANIES IN AUSTRALIA  
BY COUNTRY AND CATEGORY OF INVESTMENT, 1967-68 TO 1971-72**  
(\$ million)

<i>Year</i>	<i>United Kingdom</i>	<i>U.S.A.</i>	<i>Canada</i>	<i>Japan</i>	<i>E.E.C. (a)</i>	<i>Other countries</i>	<i>Total</i>
<b>DIRECT INVESTMENT</b>							
<b>Undistributed income—</b>							
1967-68 . . . . .	116	88	16	2	-1	8	228
1968-69 . . . . .	143	118	12	3	-2	8	281
1969-70 . . . . .	156	108	11	-2	2	10	284
1970-71 . . . . .	146	132	14	-3	3	7	299
1971-72 . . . . .	137	160	20	-1	2	-7	311
<b>Other direct investment—</b>							
1967-68 . . . . .	7	249	19	13	23	21	332
1968-69 . . . . .	78	189	5	15	31	30	348
1969-70 . . . . .	87	296	23	23	41	37	507
1970-71 . . . . .	159	240	25	59	50	125	657
1971-72 . . . . .	155	205	12	72	33	123	601

**PORTFOLIO INVESTMENT AND INSTITUTIONAL LOANS**

<i>Year</i>	<i>United Kingdom</i>	<i>U.S.A.</i>	<i>Canada</i>	<i>Japan</i>	<i>E.E.C. (a)</i>	<i>Other countries</i>	<i>Total</i>
1967-68 . . . . .	269	51	2		80		402
1968-69 . . . . .	263	38	5		100		405
1969-70 . . . . .	111	-3	-5		171		279
1970-71 . . . . .	251	147	18		240		655
1971-72 . . . . .	161	188	6		232		588

**TOTAL**

<i>Year</i>	<i>United Kingdom</i>	<i>U.S.A.</i>	<i>Canada</i>	<i>Japan</i>	<i>E.E.C. (a)</i>	<i>Other countries</i>	<i>Total</i>
1967-68 . . . . .	392	387	38		145		962
1968-69 . . . . .	484	344	22		185		1,035
1969-70 . . . . .	354	406	29		281		1,070
1970-71 . . . . .	556	518	57		481		1,611
1971-72 . . . . .	453	553	38		454		1,499

(a) Includes France, Federal Republic of Germany, Italy, Netherlands, Belgium and Luxembourg.

Minus sign (-) denotes outflow.

**INFLOW OF DIRECT OVERSEAS INVESTMENT IN COMPANIES  
IN AUSTRALIA, BY INDUSTRY, 1967-68 TO 1971-72**  
(\$ million)

<i>Year</i>	<i>Primary production</i>	<i>Manufacturing</i>	<i>Other industries</i>	<i>Total</i>
1967-68 . . . . .	176	224	161	560
1968-69 . . . . .	261	199	170	630
1969-70 . . . . .	257	232	301	791
1970-71 . . . . .	332	247	377	956
1971-72 . . . . .	404	203	304	911

The next three tables show investment income payable overseas by companies in Australia.

**INVESTMENT INCOME PAYABLE OVERSEAS BY COMPANIES IN AUSTRALIA  
BY CATEGORY OF INCOME(a), 1967-68 TO 1971-72**  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Direct investment income payable overseas by companies in Australia—					
Australian branches—					
Unremitted profits (net) . . . . .	34	34	41	52	71
Remitted profits and interest . . . . .	44	68	76	94	92
Australian subsidiaries—					
Undistributed profits (net) . . . . .	194	247	244	247	240
Distributed earnings—					
Dividends payable . . . . .	104	106	141	131	134
Interest payable . . . . .	25	34	51	63	88
Total . . . . .	401	489	553	588	625
Income payable overseas on portfolio investment and institutional loans—					
Dividends . . . . .	40	50	55	57	72
Interest . . . . .	22	32	36	45	66
Total . . . . .	62	82	91	102	138
Grand total . . . . .	463	571	644	690	763

(a) Excludes investment income payable overseas by life assurance companies.

**INVESTMENT INCOME PAYABLE OVERSEAS BY COMPANIES IN AUSTRALIA,  
BY COUNTRY AND CATEGORY OF INCOME(a), 1967-68 To 1971-72**  
(\$ million)

Year	United Kingdom	U.S.A.	Canada	Japan	E.E.C. (b)	Other countries	Total
DIRECT INVESTMENT INCOME							
Undistributed income—							
1967-68 . . . . .	116	88	16	2	-1	8	228
1968-69 . . . . .	143	118	12	3	-2	8	281
1969-70 . . . . .	156	108	11	-2	2	10	284
1970-71 . . . . .	146	132	14	-3	3	7	299
1971-72 . . . . .	137	160	20	-1	2	-7	311
Distributed income on direct investment—							
1967-68 . . . . .	82	72	4	..	4	10	173
1968-69 . . . . .	87	95	6	(c)	(c)	13	208
1969-70 . . . . .	105	134	7	(c)	(c)	12	269
1970-71 . . . . .	113	138	7	5	7	18	288
1971-72 . . . . .	100	165	6	9	7	27	314
INCOME PAYABLE ON PORTFOLIO INVESTMENT AND INSTITUTIONAL LOANS							
1967-68 . . . . .	27	19	1	15			62
1968-69 . . . . .	37	24	1	19			82
1969-70 . . . . .	42	25	1	23			91
1970-71 . . . . .	44	26	1	32			102
1971-72 . . . . .	52	41	2	44			138
TOTAL							
1967-68 . . . . .	225	179	21	38			463
1968-69 . . . . .	267	237	19	48			571
1969-70 . . . . .	303	267	19	55			644
1970-71 . . . . .	303	296	23	68			690
1971-72 . . . . .	289	366	28	81			763

(a) Excludes investment income payable overseas by life assurance companies. (b) Includes France, Federal Republic of Germany, Italy, Netherlands, Belgium and Luxembourg. (c) Not available for publication.

**DIRECT INVESTMENT INCOME PAYABLE OVERSEAS BY COMPANIES  
IN AUSTRALIA, BY INDUSTRY, 1967-68 TO 1971-72**  
(\$ million)

<i>Year</i>	<i>Primary production</i>	<i>Manu- facturing</i>	<i>Other industries</i>	<i>Total</i>
1967-68 . . . .	54	225	122	401
1968-69 . . . .	88	230	172	490
1969-70 . . . .	108	255	190	553
1970-71 . . . .	183	240	165	588
1971-72 . . . .	175	239	211	625

**Australian investment in companies overseas and investment income receivable from companies overseas**

The outflow of Australian investment in companies since 1967-68 and a classification by country in which the capital was invested are shown in the following two tables.

**OUTFLOW OF AUSTRALIAN INVESTMENT IN COMPANIES OVERSEAS  
BY CATEGORY OF INVESTMENT, 1967-68 TO 1971-72**  
(\$ million)

Year	Direct investment					Portfolio investment and institutional loans(a)	Grand total
	Overseas branches		Overseas subsidiaries				
	Unre-mitted profits (net)	Other direct investment	Undis-tributed profits (net)	Other direct investment			
Total							
1967-68	2	7	18	20	47	1	48
1968-69	-1	11	21	37	67	3	70
1969-70	1	4	23	107	136	6	142
1970-71	1	12	26	39	79	12	90
1971-72	-3	23	37	50	108	11	119

(a) Excludes portfolio investment in Papua New Guinea other than some long-term trade credit and short-term assets.  
Minus sign (-) denotes inflow.

**OUTFLOW OF AUSTRALIAN INVESTMENT IN COMPANIES OVERSEAS  
BY COUNTRY, 1967-68 TO 1971-72**  
(\$ million)

<i>Year</i>	<i>United Kingdom</i>	<i>New Zealand</i>	<i>U.S.A. and Canada</i>	<i>Papua New Guinea(a)</i>	<i>Other countries</i>	<i>Total</i>
1967-68 . . . .	6	8	2	21	10	48
1968-69 . . . .	17	14	1	33	5	70
1969-70 . . . .	35	13	5	79	10	142
1970-71 . . . .	-1	22	9	45	16	90
1971-72 . . . .	-1	15	10	70	25	119

(a) Excludes portfolio investment other than some long-term trade credit and short-term assets.



The next two tables show income from direct investment receivable by Australian companies from companies overseas, and the countries from which it is receivable.

**DIRECT INVESTMENT INCOME RECEIVABLE FROM OVERSEAS BY  
COMPANIES IN AUSTRALIA, BY CATEGORY OF INCOME(a)  
1967-68 TO 1971-72**  
(\$ million)

Year	Overseas branches		Overseas subsidiaries		Total
	Unre- mitted profits (net)	Remitted profits and interest	Undis- tributed profits (net)	Dividends and interest receivable	
1967-68.	2	6	18	19	45
1968-69.	-1	5	21	24	49
1969-70.	1	5	23	26	55
1970-71.	1	6	26	27	60
1971-72.	-3	4	37	34	72

(a) Details are not available of income receivable in Australia on either portfolio investment and institutional loans or on Australian holdings of foreign government securities.

**DIRECT INVESTMENT INCOME RECEIVABLE FROM OVERSEAS BY COMPANIES  
IN AUSTRALIA, BY COUNTRY(a), 1967-68 TO 1971-72**  
(\$ million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Papua New Guinea(a)	Other countries	Total
1967-68	3	18	1	9	14	45
1968-69	2	17	2	12	17	49
1969-70	4	16	1	16	17	55
1970-71	6	17	(b)	15	22	60
1971-72	4	14	3	29	22	72

(a) Details are not available of income receivable in Australia on either portfolio investment and institutional loans or on Australian holdings of foreign government securities. (b) Not available for publication—included in 'Other countries'.

### BALANCE OF PAYMENTS

Estimates of a country's balance of payments are prepared for the purpose of providing a systematic record in money terms of the economic transactions which take place over a period between that country and all other countries. Such records are essential to the examination of influences which external factors have on the domestic economy. The Australian economy is subject to fairly large fluctuations in export income, and it is also affected in important respects by variations in the level of foreign investment and the demand for imports. Consequently, these estimates have always assumed particular importance in this country.

Official estimates of Australia's balance of payments covering the period 1928-29 to 1930-31 were included in the Appendix to Year Book No. 24, 1931. Except for the war years (1939 to 1945), estimates have since been published annually. Detailed estimates are currently provided twice yearly in the form of a mimeographed publication *Balance of Payments* (8.1). This publication brings the estimates forward to the end of the most recent financial year or half-year and provides also a description of the various items included. A summarised statement of the principal current account items and capital movements is prepared and issued on a quarterly basis in the *Balance of Payments—Quarterly Summary* (8.2).

In the form of presentation adopted for the Australian balance of payments estimates a basic distinction is made between 'current account' and 'capital account' transactions. Current account transactions may be defined as those involving changes in the ownership of goods or the rendering of services between residents of Australia and the rest of the world and include such items as exports, imports, shipping freights, dividends, profits and interest, travel, and government expenditure. The current account also includes the value of transfers in the form of gifts in cash or kind made or received by residents of Australia, both private and government, to or from the rest of the world. Capital account transactions may be defined as those involving claims to money and titles of investment between residents of Australia and those of another country and include government loan-raising operations overseas, investment by overseas residents in Australian companies, the investment of Australian residents in companies overseas, and changes in the level of Australia's foreign reserves.

By definition, the balance of payments on current account and the balance of payments on capital account during a given period must exactly offset one another. Errors and omissions, however, occur in the estimation of the amounts involved in various items in both the current and capital accounts, and, in addition, there are differences in timing between the statistical recording of trade and invisible transactions and the corresponding foreign exchange transactions. It is therefore necessary to introduce into the estimates a 'balancing item' which allows the identity between the current and capital account balances to be preserved. The 'balancing item' is included in the capital account, but, as mentioned above, it includes discrepancies in the current account and does not, as is frequently supposed, include only errors, omissions and timing differences related to capital transactions.

Details of the estimates are assembled from a variety of sources of which the following are the more important: (i) statistics of exports and imports obtained from Australian trade statistics; (ii) details of the import valuation adjustment obtained from a sample of the invoices submitted to the Department of Customs and Excise in respect of imports into Australia; (iii) information on particular invisible current account items and capital movements obtained by regular inquiry from private organisations and government departments; (iv) details of receipts and payments of foreign exchange provided by the banking system; (v) information on profits remitted, undistributed income and private investment in companies provided by statistics of overseas investment collected by this Bureau; (vi) information on freight on imports and other items concerned with overseas transportation obtained from a sample of the invoices submitted to the Department of Customs and Excise in respect of imports into Australia and from a survey conducted by this Bureau of overseas shipping and airline operations; and (vii) information supplied by the Reserve Bank of Australia on gold and net foreign assets of official and banking institutions.

### Current account

The balance of payments on current account is arranged to show a series of items for each of which there is a credit and/or a debit entry. In most cases the credit entries represent transactions in goods and services, property income, and transfers, which result in receipts of foreign exchange, while the debit entries represent similar transactions which result in payments of foreign exchange. Some entries which do not entail movements of foreign exchange are also included, the principal examples being those for undistributed income and transactions, mainly in goods, in which the payments due are subsequently capitalised. These amounts are treated as credits or debits in the relevant sections of the current account, and as corresponding outflows or inflows in non-monetary items in the capital account. Transfers in kind provide a further example of transactions which do not require a movement of foreign exchange. The values of transfers received or provided in kind are shown as credits or debits respectively.

The largest items shown in the current account are exports and imports, and the difference between them represents the balance of trade. This is usually the most variable relationship in the balance of payments and is, therefore, a most important one. *For balance of payments purposes, certain adjustments are made to the recorded trade statistics.* Briefly, these adjustments are made to exclude those transactions for which there is no change of ownership between residents and non-residents of Australia and to include certain transactions for which there has been a change of ownership but for which customs entries are not required. In addition, a valuation adjustment is made to the recorded import statistics in order to remove the overstatement which results from the basis of valuation for customs duty. A full description of the adjustments was provided in the Appendix to the publication *Balance of Payments, 1968-69*. A full evaluation of the overall position on current account, however, occurs only after the invisible items have been taken into account. In value terms the most important of these are the transportation items. Entries appear on both the debit and credit sides, the principal component on the debit side being freight payable overseas on imports into Australia. The principal component on the credit side is expenditure by overseas carriers, which represents mainly overseas ships' expenditure for stevedoring, port charges, etc. incurred in loading and discharging goods at Australian ports, and stores purchased in Australia. The items next in importance are those

concerning income from property. Debit entries under this heading include dividends, profits, interest and royalties payable overseas, while the credit entries include similar details of amounts receivable by Australian residents. These items include undistributed income in respect of which, as mentioned above, no monetary movements occur. The remaining items are smaller than those mentioned above, and include travel, government transactions, transfers (including foreign aid made available by the Australian Government), and, on the credit side, the net value of Australian gold production.

### Capital account

In the capital account, transactions are recorded on a net basis; that is, according to the net effect of all debit and credit entries relating to each item. Thus entries on the credit side represent a net increase in non-residents' assets in Australia or a net decrease in Australian assets overseas, while debit entries represent a net decrease in non-residents' assets in Australia or a net increase in Australian assets overseas.

Capital account transactions are grouped according to the sector of the Australian party to the transactions. The government sector, therefore, includes all capital transactions of central, State, local and semi-government authorities with the exception of transactions of monetary institutions (which are included in the monetary sector), while the private sector covers transactions of all resident individuals and private institutions (again excepting monetary institutions). The monetary sector covers all banking institutions, including government-owned banks. Transactions of the monetary sector are further sub-divided into those of official and 'other' monetary institutions. Transactions of official institutions include changes in Australia's official reserve assets (consisting of gold, foreign exchange, the I.M.F. gold tranche and special drawing rights in the I.M.F.) and transactions between the Reserve Bank of Australia and foreign central monetary authorities and the I.M.F. Also included is an item, *18.4 Allocation of Special Drawing Rights*. This is the counterpart to the change in official reserve assets due to the allocation to Australia of S.D.R.s by the I.M.F. Such an entry is necessary in this case because without it there would be no corresponding credit to the increase in assets (debit) and the allocation would be reflected in an offsetting movement in the balancing item. 'Other' monetary institutions includes all other transactions of Australian monetary institutions.

In the government sector the most important items include transactions by non-residents in government securities domiciled overseas and in Australia and transactions involving changes in Australia's assets with and liabilities to international development institutions such as the International Bank for Reconstruction and Development and the Asian Development Bank. Other government transactions are largely a reflection of the net effect on the balance of payments of leads and lags between payments made overseas for items of equipment for the defence services or government airlines and the delivery of the equipment. In periods where payments exceed the value of deliveries a net debit results; in periods where the value of deliveries exceeds payments a net credit is recorded.

In the private sector the most important items are overseas investment in Australian companies, Australian investment overseas, and the transactions of marketing authorities. The figures for marketing authorities represent changes in the estimated value of commodity stocks held overseas by, or in amounts owed by overseas debtors to, the principal Australian marketing authorities.

In the monetary sector the most important item is that which shows the net change in Australia's official reserve assets.

The balancing item includes errors and omissions and timing differences, referred to on page 321.

### Tables—Balance of payments

The following tables show, for the three years 1969–70 to 1971–72, particulars of:

- (i) the balance of payments; and
- (ii) the balance of payments by regions



## BALANCE OF PAYMENTS: AUSTRALIA, 1969-70 TO 1971-72

(\$ million)

	1969-70		1970-71		1971-72	
	Credit	Debit	Credit	Debit	Credit	Debit
CURRENT ACCOUNT						
Goods—						
1 Exports f.o.b.(a)	3,969	..	4,216	..	4,729	..
2 Imports f.o.b.(a)	..	3,553	..	3,790	..	3,791
<i>Balance of trade</i>	416	..	426	..	938	..
Invisibles—						
3 Gold production	18	..	15	..	13	..
4 Transportation—						
4.1 Freight on imports(b)	..	397	..	411	..	395
4.2 Expenditure of overseas carriers	289	..	305	..	330	..
4.3 Other transportation	156	357	164	426	166	438
5 Travel	120	186	136	199	139	266
6 Government—						
6.1 Australian government—						
6.11 Defence expenditure	..	72	..	73	..	63
6.12 Other expenditure	..	52	..	54	..	61
6.13 Services to non-residents	40	..	26	..	27	..
6.2 Foreign governments' expenditure	48	..	56	..	63	..
7 Miscellaneous—						
7.1 Business expenses	64	80	87	106	102	132
7.2 Other	54	67	48	64	58	78
8 Property income—						
8.1 Direct investment—						
8.11 Undistributed	24	284	27	299	35	311
8.12 Distributed	31	269	33	289	37	314
8.2 Interest on government loans	..	90	..	88	..	88
8.3 Royalties and copyrights	7	68	6	64	4	56
8.4 Other	93	91	112	102	163	138
9 Government transfers—						
9.1 Papua New Guinea	..	116	..	123	..	132
9.2 Other foreign aid	..	64	..	62	..	73
10 Private transfers—						
10.1 Migrants' funds	136	41	130	49	153	69
10.2 Other	50	73	51	85	73	103
<i>Balance on current account</i>	..	761	..	873	..	416

For footnotes see next page.

**BALANCE OF PAYMENTS: AUSTRALIA, 1969-70 TO 1971-72—continued**  
(\$ million)

	1969-70		1970-71		1971-72	
	Credit	Debit	Credit	Debit	Credit	Debit
<b>CAPITAL ACCOUNT (NET)</b>						
<b>Government—</b>						
11 Government securities—						
11.1 Domiciled overseas . . . .	..	131	..	47	..	49
11.2 Domiciled in Australia . . . .	6	..	..	2	3	..
12 International development institutions(c)	..	7	..	7	..	7
13 Other government transactions . . . .	..	53	..	8	..	8
<b>Private—</b>						
14 Overseas investment in Australian companies—						
14.1 Direct investment—						
14.11 Undistributed income . . . .	284	..	299	..	311	..
14.12 Other . . . . .	507	..	657	..	601	..
14.2 Portfolio investment and institutional loans . . . . .	279	..	655	..	588	..
15 Australian investment overseas—						
15.1 Direct investment—						
15.11 Undistributed income . . . .	..	24	..	27	..	35
15.12 Other . . . . .	..	112	..	51	..	73
15.2 Portfolio investment . . . . .	..	19	..	29	..	35
16 Other private investment . . . . .	11	..	12	..	4	..
17 Marketing authorities . . . . .	..	47	..	43	..	45
<b>Monetary—</b>						
18 Official monetary institutions—						
18.1 Changes in liabilities—						
18.11 Use of I.M.F. credit . . . .	..	..	..	..	..	..
18.12 Other . . . . .	5	..	7	..	5	..
18.2 Changes in official reserve assets	..	118	..	742	..	1,544
18.3 Other transactions . . . . .	8	..	3	..	3	..
18.4 Allocation of Special Drawing Rights . . . . .	75	..	64	..	63	..
19 Other monetary institutions—						
19.1 Changes in liabilities . . . .	35	..	29	..	43	..
19.2 Changes in assets—						
19.21 Advances to non-residents . . . .	..	1	..	1	..	3
19.22 Other foreign assets . . . . .	..	6	71	..	31	..
Balancing item . . . . .	69	..	33	..	562	..
Balance on capital account . . . . .	761	..	873	..	416	..

(a) The amounts shown represent the recorded trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation. (b) Freight payable overseas only. Total freight and insurance on imports, whether payable overseas or in Australia, is estimated at \$443 million in 1969-70, \$463 million in 1970-71, and \$465 million in 1971-72. (c) Subscription transactions only.

## BALANCE OF PAYMENTS BY REGIONS: AUSTRALIA 1969-70 TO 1971-72

(\$ million)

	1969-70	1970-71	1971-72
<b>CURRENT ACCOUNT(a)</b>			
Exports f.o.b.(b)—			
United States of America . . . . .	551	511	612
Canada . . . . .	112	105	138
United Kingdom . . . . .	483	486	441
European Economic Community . . . . .	445	386	460
Japan . . . . .	1,018	1,182	1,352
New Zealand . . . . .	189	222	262
Papua New Guinea . . . . .	128	144	141
Sino-Soviet Area . . . . .	217	167	171
Other countries . . . . .	826	1,014	1,153
<i>Total exports . . . . .</i>	<i>3,969</i>	<i>4,216</i>	<i>4,729</i>
Imports f.o.b.(b)—			
United States of America . . . . .	840	905	889
Canada . . . . .	140	153	124
United Kingdom . . . . .	774	800	762
European Economic Community . . . . .	437	499	490
Japan . . . . .	472	557	606
New Zealand . . . . .	81	90	107
Papua New Guinea . . . . .	20	22	22
Sino-Soviet Area . . . . .	53	53	62
Other countries . . . . .	736	712	729
<i>Total imports . . . . .</i>	<i>3,553</i>	<i>3,790</i>	<i>3,791</i>
Invisibles (net)—			
United States of America . . . . .	-360	-360	-427
Canada . . . . .	-27	-41	-43
United Kingdom . . . . .	-393	-428	-399
European Economic Community . . . . .	-95	-124	-120
Japan . . . . .	3	18	15
New Zealand . . . . .	20	3	2
Papua New Guinea . . . . .	-85	-96	-92
Sino-Soviet Area . . . . .	-6	..	4
Other countries . . . . .	-236	-262	-287
International agencies . . . . .	-16	-25	-20
Gold production . . . . .	18	15	13
<i>Total invisibles (net) . . . . .</i>	<i>-1,177</i>	<i>-1,299</i>	<i>-1,353</i>
Balance on current account—			
United States of America . . . . .	-650	-754	-704
Canada . . . . .	-55	-89	-29
United Kingdom . . . . .	-685	-743	-720
European Economic Community . . . . .	-87	-236	-150
Japan . . . . .	549	644	761
New Zealand . . . . .	129	135	157
Papua New Guinea . . . . .	23	26	27
Sino-Soviet Area . . . . .	159	114	113
Other countries . . . . .	-146	40	136
International agencies . . . . .	-16	-25	-20
Gold production . . . . .	18	15	13
<i>Total balance on current account . . . . .</i>	<i>-761</i>	<i>-873</i>	<i>-416</i>

For footnotes see next page.



BALANCE OF PAYMENTS BY REGIONS: AUSTRALIA 1969-70 TO 1971-72—*continued*  
(\$ million)

	1969-70	1970-71	1971-72
<b>CAPITAL ACCOUNT (NET)(a)</b>			
<b>Non-monetary sector—</b>			
<b>Government capital movements—</b>			
United States of America . . . . .	-86	2	15
Canada . . . . .	-3	-9	-1
United Kingdom . . . . .	-81	-30	-67
European Economic Community . . . . .	12	-5	24
Japan . . . . .	..	..	..
New Zealand . . . . .	..	..	-1
Papua New Guinea . . . . .	-5	-2	-12
Sino-Soviet Area . . . . .	..	..	..
International development institutions . . . . .	-7	-7	-7
Other countries and international institutions . . . . .	-16	-12	-11
<i>Total government capital movements</i> . . . . .	-185	-63	-60
<b>Overseas investment in Australian companies—</b>			
United States of America . . . . .	406	518	553
Canada . . . . .	29	57	39
United Kingdom . . . . .	354	556	453
European Economic Community . . . . .	n.a.	n.a.	n.a.
Japan . . . . .	n.a.	n.a.	n.a.
New Zealand . . . . .	21	6	..
Papua New Guinea . . . . .	2	6	7
Sino-Soviet Area . . . . .	..	..	..
Other countries(c) . . . . .	195	361	343
<i>Total overseas investment in Australian companies</i> . . . . .	1,070	1,611	1,499
<b>Other capital movements—</b>			
United States of America . . . . .	1	-5	-5
Canada . . . . .	-3	3	-5
United Kingdom . . . . .	-40	3	25
European Economic Community . . . . .	n.a.	n.a.	n.a.
Japan . . . . .	n.a.	n.a.	n.a.
New Zealand . . . . .	-12	-21	-13
Papua New Guinea . . . . .	-90	-63	-94
Sino-Soviet Area . . . . .	-40	60	14
Other countries(c) . . . . .	-6	-115	-104
<i>Total other private capital movements</i> . . . . .	-190	-138	-183
<b>Total non-monetary sector transactions—</b>			
United States of America . . . . .	321	514	563
Canada . . . . .	23	51	32
United Kingdom . . . . .	233	528	411
European Economic Community . . . . .	n.a.	n.a.	n.a.
Japan . . . . .	n.a.	n.a.	n.a.
New Zealand . . . . .	10	-16	-14
Papua New Guinea . . . . .	-94	-59	-99
Sino-Soviet Area . . . . .	-40	60	14
International development institutions . . . . .	-7	-7	-7
Other countries and international institutions(c) . . . . .	173	234	228
<i>Total non-monetary sector transactions</i> . . . . .	709	1,410	1,316
<b>Monetary sector transactions—</b>			
Official institutions(d) . . . . .	-31	-668	-1,474
Other(d) . . . . .	28	99	72
Balancing item(d) . . . . .	69	33	562
<i>Total balance on capital account(d)</i> . . . . .	761	873	416

(a) For current account balances minus sign (—) denotes deficit; for capital account items minus sign (—) denotes an increase in overseas assets or a decrease in liabilities to overseas. (b) The amounts shown represent recorded trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation. (c) Including Japan and European Economic Community. (d) No regional split is available for these items.

**International reserves**

The following table shows the total gold and net foreign assets of official and banking institutions as at 30 June 1970, 1971 and 1972.

**GOLD AND NET FOREIGN ASSETS  
OFFICIAL AND BANKING INSTITUTIONS, 1970 TO 1972**

(Source: Reserve Bank of Australia)

(\$ million)

	30 June		
	1970	1971	1972
Official reserve assets—			
Gold . . . . .	241	227	233
Special Drawing Rights . . . . .	79	146	209
I.M.F. gold tranche . . . . .	217	186	149
Foreign exchange—			
United States dollars . . . . .	371	696	1,345
Sterling . . . . .	617	947	1,657
Others . . . . .	14	77	171
<i>Total</i> . . . . .	<i>1,538</i>	<i>2,280</i>	<i>3,764</i>
Other foreign assets (net) . . . . .	100	29	—3
<i>Total</i> . . . . .	<i>1,638</i>	<i>2,309</i>	<i>3,761</i>

**INDEXES OF VALUES OF EXPORTS AND IMPORTS  
AT CONSTANT PRICES**

The following tables show annual indexes of the values of Australian exports and imports of merchandise at average 1966–67 prices. A description of these measures is given in the first issue of the bulletin *Exports and Imports of Merchandise at Constant Prices* (8.21) published on 10 October 1968.

**EXPORTS OF MERCHANDISE, 1962-63 TO 1971-72**

Indexes of Values at Average 1966-67 Prices

(Base: Year 1966–67 = 100)

	<i>Food and live animals</i>			<i>Total food and live animals</i>	<i>Wool and sheep-skins</i>	<i>Metal-liferous ores and metal scrap</i>	<i>Metal manufactures machinery, transport equipment</i>	<i>Other exports</i>	<i>All exports of merchandise (a)</i>
	<i>Meat and meat preparations</i>	<i>Cereal grains and cereal preparations</i>	<i>Other (dairy produce, fruit, sugar, etc.)</i>						
Percentage of total value of exports in 1966–67(b)	9.5	15.8	12.5	37.8	29.7	5.6	14.2	12.7	100.0
1962–63 . . . . .	}	}	}	}	}	}	}	}	77
1963–64 . . . . .									90
1964–65 . . . . .									89
1965–66 . . . . .									90
1966–67 . . . . .	100	100	100	100	100	100	100	100	100
1967–68 . . . . .	100	94	99	97	102	147	100	121	105
1968–69 . . . . .	98	80	102	92	107	211	116	147	114
1969–70 . . . . .	132	106	100	111	115	302	151	174	136
1970–71 . . . . .	135	146	109	131	105	385	156	189	148
1971–72 . . . . .	167	150	111	141	113	392	186	217	163

For footnotes see next page

## IMPORTS OF MERCHANDISE, 1962-63 TO 1971-72

Indexes of Values at Average 1966-67 Prices

(Base: Year 1966-67 = 100)

	<i>Food, beverages, and tobacco</i>	<i>Fuels</i>	<i>Basic materials</i>	<i>Chemicals (including plastics)</i>	<i>Textiles, fabrics, etc.</i>	<i>Metal manu- factures, machinery, transport equipment</i>	<i>Other imports</i>	<i>All imports of merchan- dise(a)</i>
Percentage of total value of imports in 1966-67(b)	5.2	8.2	7.4	9.9	8.0	43.3	18.0	100.0
1962-63 . . .	}			Not available			}	73
1963-64 . . .								81
1964-65 . . .								98
1965-66 . . .								98
1966-67 . . .	100	100	100	100	100	100	100	100
1967-68 . . .	99	100	107	109	107	111	111	109
1968-69 . . .	110	105	106	123	114	116	121	116
1969-70 . . .	116	111	112	132	122	127	137	126
1970-71 . . .	120	81	108	145	127	133	152	130
1971-72 . . .	124	71	104	139	133	113	153	121

(a) The series shown for years prior to 1966-67 are not strictly comparable to the series shown from 1966-67 onwards (see the bulletin referred to in the headnote to these two tables). (b) These percentages may be used in analysing the contribution of each group to movements in the total index.



## CHAPTER 12

### TRANSPORT, COMMUNICATION AND TRAVEL

The statistics in this chapter relate in the main to the year 1971-72, with comparisons restricted to a few recent years. More detailed figures and particulars for earlier years are included in the annual bulletins, *Transport and Communication* (14.11), *Public Authority Finance—Commonwealth Authorities* (5.12), and *Public Authority Finance* (5.33), and in the annual mimeographed statement *Motor Vehicle Registrations* (14.1). Current information on subjects dealt with in this chapter appears in the *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5), *Overseas Shipping Cargo* (monthly) (14.10), *Motor Vehicle Registrations* (quarterly) (14.2), two preliminary monthly statements *Registrations of New Motor Vehicles* (14.6) (14.8), two quarterly bulletins *Road Traffic Accidents involving Casualties* (14.9) (14.14), *Road Accident Fatalities* (monthly) (14.13), and *Overseas Arrivals and Departures* (monthly and quarterly) (4.3) (4.1). Greater detail on the latter subject is contained in the annual bulletin *Demography* (4.9).

Information additional to that contained in Bureau publications is available in the annual reports and other statements of the Department of Transport, the various harbour boards and trusts, the several Government railway authorities, the Department of Civil Aviation, the Postmaster-General's Department, the Overseas Telecommunications Commission, the Australian Broadcasting Control Board, and the Australian Broadcasting Commission.

### THE AUSTRALIAN TRANSPORT ADVISORY COUNCIL

In April 1946, the State and Federal Governments agreed to establish a co-ordinating and advisory committee at Ministerial level to review annually the various laws and regulations deemed necessary to safeguard the interests of the State Governments and road users generally and to consider matters of transport policy.

The Australian Transport Advisory Council (A.T.A.C.) thus established is comprised of the Australian Minister for Transport as Chairman, the Minister for the Australian Capital Territory and Minister for the Northern Territory and each State Minister for Transport.

The Council primarily considers policy matters relating to transport operations, co-ordination and development. Its functions are: to initiate discussion and report to the respective Governments as necessary on any matter raised by the Council, or any State or Commonwealth Government Authority; generally to exercise its purely advisory functions, and to report as necessary to the respective Governments concerned on any matter which will tend to promote a better co-ordination of transport development, while at the same time encouraging modernisation and innovation to meet changing needs; and to assist in maintaining continuous and comprehensive research in relation to transport development in Australia and abroad; such research to be carried out for the benefit of Australian Transport authorities and agencies.

The regulation of and the executive responsibility for transport is shared between the Commonwealth and State Governments. A.T.A.C. is the meeting ground of Commonwealth and States at a Ministerial level and provides an effective means for inviting discussion and reaching uniformity of approach towards transport administrative procedures and policy. It also provides a means for reviewing and discussing national solutions of transport problems and the rectification of transport deficiencies generally. The Council has been active in: the establishment of special committees and conferences to examine and report on specific problems such as road safety, motor vehicle standards and safety features, motor vehicle emissions, transport economic research, highway planning, level crossing accidents, blood tests for road users, driver improvement, pedestrian behaviour, etc.; the exchange of views and formulation of common policies on a wide range of transport matters; effecting at ministerial level Commonwealth-State and interstate co-operation on such matters as construction and operation of interstate railway links, collection of fines and fees interstate, policing of regulations, etc.; and the publication of comprehensive surveys of Australian transport.

Typical of matters A.T.A.C. has examined from time to time are the following: the effect of standardisation of railway gauges on other modes of transport; advanced national policies of road development and research; transport in relation to interstate tourist traffic; standardisation of traffic signs and road signs; standard and improved statistical data relating to transport of passengers and goods; uniform road traffic laws and standards for motor vehicle design and equipment; pipelines as a transport medium; and containerisation and the need for uniform legislation, particularly in relation to maximum weights of road vehicles.

#### Advisory Committees established by the Australian Transport Advisory Council

Some of the Council's most useful work has been accomplished through the agency of committees established by the Council from time to time. Some advisory committees are of a semi-permanent nature. They were established to initiate discussion and action on transport problems referred by member Ministers and other authorities and to undertake specialised work. These committees meet at regular intervals and report to A.T.A.C. through the Council's *Standing Committee of Advisers*, which comprises heads of Ministerial Departments or their deputies, under the chairmanship of the Secretary, Department of Transport.

The administration of the Council and its committees is the responsibility of the Department of Transport.

The general practice is that the Council convenes twice a year, and more frequently if the need arises. The meetings move successively from one State or Territory to another, and are usually held in one of the chambers of the State or Commonwealth Parliaments or the Northern Territory Legislative Council. Ministers are usually accompanied by officials and advisers.

Details of the advisory committees at present established, including their composition and function, are set out hereunder.

*The Advisory Committee on Safety in Vehicle Design* comprises an ergonomics expert, a medical practitioner, a traffic expert, a research engineer, a mechanical design engineer, a body design engineer, a production engineer, an officer from the Vehicle Structures Safety Branch of the Department of Transport, and a nominee of the Standing Committee of Advisers. The Chairman is an officer of the Department of Transport.

The Committee's function is to advise on safety standards in respect of motor vehicles. Recommendations to A.T.A.C. are submitted in the form of Australian design rules for motor vehicle safety, which set out detailed technical specifications of each safety feature, and include appropriate dates of implementations for various classes of vehicles.

Design rules endorsed by the Council up to February 1973 cover the following items:

Reversing signal lamps	Glare reduction in field of view
Door latches and hinges	Rear vision mirrors
Seat anchorages for motor vehicles	Demisting of windscreens
Seat belts	Windscreen wipers and washers
Seat belt anchorage points	Location and visibility of instruments
Direction turn signal lamps	Safety rims
Hydraulic brake hoses	Instrument panels
Safety glass	Head restraints
Standard controls for automatic transmissions	Anti-theft locks
Steering columns	Vehicle engine emission control
Internal sun visors	New pneumatic passenger car tyres
Fuel systems for goods vehicles	Tyre selection
	Motor vehicle noise

A publication *Australian Design Rules for Motor Vehicle Safety*, incorporating design rules endorsed by the Council, is issued by the Department of Transport. Amendments and additions are also issued by that Department.

*The Advisory Committee on Vehicle Performance* comprises a freight operator, a passenger operator, a motor vehicle design engineer, a private road user, an official of the Transport Worker's Union of Australia, a bus expert, nominees of the National Association of Australian State Road Authorities and the Society of Automotive Engineers (Australia), and an official from each State and Territory, nominated by the respective member Ministers of A.T.A.C. The Chairman is an officer of the Department of Transport.

The function of the Committee is to advise on the on-road standards and equipment of vehicles and their loads. Many of its recommendations to A.T.A.C. are in the form of draft regulations which detail minimum standards for most aspects of vehicle construction and operation, and are recommended for adoption in the legislation of the States and Territories.

A publication *Draft Regulations Defining Vehicle Construction, Equipment and Performance Standards for Road Vehicles*, incorporating provisions endorsed by the Council, is issued by the Department of Transport, which also provides an amendment service.

The *Advisory Committee on Road User Performance and Traffic Codes* comprises a transport operator, a private road user, a lawyer, a medical practitioner, a nominee of vehicle manufacturers, an official of the Transport Worker's Union of Australia, and an official from each State and Territory, nominated by the respective member Ministers of A.T.A.C. The Chairman is an officer of the Department of Transport.

The Committee's function is to review and advise on the ways of achieving improvement in road user performance and to advise on the uniform National Road Traffic Code. Many of the Committee's recommendations to A.T.A.C. are in the form of model traffic laws, which are recommended for adoption in the legislation of the States and Territories.

A document *The National Road Traffic Code*, incorporating model regulations endorsed by the Council, is published by the Department of Transport, which also provides an amendment service.

In addition to traffic laws proper, the Committee has dealt with allied subjects such as driver licensing, medical fitness standards, the uniform number plates scheme, the scheme for visiting motorists, United Nations Conventions on road traffic and uniform accident reporting.

The *Advisory Committee on the Transport of Dangerous Goods* comprises seven Commonwealth and eight State officials, as well as one nominee of the Australian Road Transport Federation, the Australian Chemical Industry Council, the petroleum industry and the Standards Association of Australia. The Chairman is an officer of the Department of Transport.

The function of the Committee is to advise on a uniform code relating to the transport of dangerous goods, and it has prepared a model code relating to the classification, labelling and transport of dangerous goods within Australia.

The *Committee on Motor Vehicle Emissions* comprises of nominees from the automobile and petroleum industries and appropriate Commonwealth and State departments. The Chairman is an officer of the Department of Transport. The function of the Committee is to advise on all aspects of the control of motor vehicle emissions including imposition of controls and their levels, technical developments, and liaison with industries and environmental authorities on these matters.

The *Publicity Advisory Committee on Education in Road Safety* comprises the Secretary/Managers of State and Territory Road Safety Councils. The Chairman is an officer of the Department of Transport.

The Committee's function is to advise on publicity and education in road safety. The Committee co-ordinates and makes recommendations on publicity and education campaigns throughout the States and Territories.

*Ad hoc advisory committees.* Advisory committees of an ad hoc nature are created as the need arises. Examples are: the Air Cushion Vehicle Committee and the Study Team on Transport Costs.

## SHIPPING

### Control of shipping

#### Commonwealth navigation and shipping legislation

For an outline of the development and scope of Commonwealth legislation, see Year Book No. 55, pages 366-7.

*Commonwealth Acts connected with shipping are:* the *Navigation Act 1912-1972*, the *Sea Carriage of Goods Act 1924*, the *Seamen's Compensation Act 1911-1972*, the *Seamen's War Pensions and Allowances Act 1940-1972*, the *Pollution of the Sea by Oil Act 1960-1972*, the *Pollution of the Sea by Oil (Shipping Levy) Act 1972*; the *Pollution of the Sea by Oil (Shipping Levy Collection) Act 1972*; the *Australian Coastal Shipping Commission Act 1956-1969*, the *Australian Coastal Shipping Agreement Act 1956*, the *Stevedoring Industry Act 1956-1971*, the *Beaches, Fishing Grounds and Sea Routes Protection Act 1932-1966*, the *Submarine Cables and Pipelines Protection Act 1963-1966*, the *Lighthouses Act 1911-1971* and the *Explosives Act 1961-1966*.



### Australian Coastal Shipping Commission

The Commission was established in 1956 for the purpose of maintaining and operating inter-state, overseas and territorial shipping services. It operates as The Australian National Line, a Commonwealth-owned merchant shipping service which at 31 December 1972 comprised twenty-eight ships. The total included one large bulk carrier on charter from a foreign owner.

The fleet included four vessels in overseas trading; the 14,082 ton (deadweight) vehicle deck/container ship, *Australian Enterprise*; the 26,420 tons (deadweight) cellular/container ship *Australian Endeavour*; the 26,097 tons (deadweight) cellular/container ship *Australian Exporter*; the 20,276 tons (deadweight) roll-on/roll-off ship *Allunga*; two vehicle deck passenger ships *Empress of Australia* 8,196 tons (gross) and *Australian Trader* 7,005 tons (gross); four vehicle deck cargo ships totalling 14,919 tons (deadweight); one container/ore carrier of 11,900 tons (deadweight) in the Darwin trade; three bulk carriers in the 50,000 tons (deadweight) class; thirteen other bulk carriers totalling 130,358 tons (deadweight); one 3,210 tons (deadweight) cellular/container ship.

During 1972, one of two vehicle deck steel carriers of 7,500 tons (deadweight) each ordered from an Australian shipyard was launched as the *Lysaght Enterprise*. The second is scheduled for launching in 1973.

To service the Australian National Line's vehicle deck ships and container/ore carriers, terminals have been established at fifteen ports: Adelaide in South Australia; Melbourne and Geelong in Victoria; Burnie, Devonport, Bell Bay and Hobart in Tasmania; Sydney and Port Kembla in New South Wales; Brisbane, Rockhampton (Port Alma), Mackay, Townsville and Cairns in Queensland; and Darwin in the Northern Territory.

In the year ended 30 June 1972 the vehicular passenger ships *Empress of Australia*, *Australian Trader* and *Princess of Tasmania* (which was sold late in 1972) carried a total of 128,919 passengers and 46,419 passenger and trade vehicles between the mainland and Tasmania. Over the same period over 7.8 million tons of cargo were carried by Australian National Line vessels.

### Australian Shipbuilding Board

Established in March 1941 as a wartime measure under the National Security (Shipbuilding) Regulations and constituted in 1948 under the *Supply and Development Act* 1939-1948, the Board consists of a Chairman, and four Members, one of whom is also a Member of the Naval Board. Members are appointed by the Minister for Transport.

The functions of the Board are to advise the Minister on matters concerning the shipbuilding industry including the consideration of tenders for ships to be built in Australia, the prices at which vessels may be purchased and sold on behalf of the Commonwealth, the levels of subsidy suitable for each project and the state and prospects of the industry generally.

To 31 December 1972 the Board had arranged for the construction of 233 vessels valued at approximately \$695 million. These vessels included specialised craft such as an oil drilling rig, dredgers of various types, off-shore drilling service vessels, floating cranes, as well as bulk carriers, oil tankers, container ships and roll-on/roll-off vessels.

Sixty of the vessels, ranging from Customs launches to survey and research vessels, landing craft and large lighthouse supply vessels, were built for the Commonwealth Government. The remaining 173 were built with Government subsidy for commercial shipowners.

There are five major Australian shipyards building merchant vessels—two in Queensland, two in South Australia, and one in New South Wales; and two shipyards engaged principally in naval shipbuilding—one in New South Wales and one in Victoria. There are also numerous small yards, situated in every State, building smaller steel, wooden, aluminium and fibre-glass working and pleasure craft.

*Shipbuilding subsidy.* The Australian shipbuilding industry has been subsidised since 1947. The Government on 31 May 1972 announced that all vessels over 200 tons gross ordered from any Australian shipyard after 1 June 1972 would attract subsidy at the rate of 25 per cent for vessels 200-1,000 tons gross, the rate increasing by 2½ per cent for each additional 1,000 tons gross to a maximum of 45 per cent, reducing to 35 per cent in 1976 and, subject to a further Tariff Board review in 1978, to 25 per cent in 1980. Previously, subsidy was applied only to vessels over 200 tons gross constructed at one of the six major ('recognised') yards and, to equate the price to the owner to the cost of building a similar vessel in the United Kingdom, to a maximum 33½ per cent of the construction cost. As in the past, all ships are prohibited imports, unless specific approval is granted by the Minister for Transport, except for certain classes where a 'general consent' applies.

### Australian Stevedoring Industry Authority

In March 1947 legislation established a permanent Stevedoring Industry Commission to continue in peace-time the functions performed during the war by the Commission established under National Security legislation. In June 1949 legislation was enacted to abolish the Stevedoring Industry Commission, on which employers and employees were represented, and establish in its place a Stevedoring Industry Board of three members, to attend to administrative matters formerly under the control of the Commission, such as the operation of labour bureaux at ports, payment of attendance money and provision of amenities. The industrial functions which previously came within the province of the Commission were assigned to a single Judge of the Commonwealth Court of Conciliation and Arbitration. In August 1956, following a Committee of Inquiry into the stevedoring industry, the Stevedoring Industry Board was replaced by the Australian Stevedoring Industry Authority of three members, including a representative of the management side of industry and a representative of the trade union movement. At the same time the judicial and non-judicial functions formerly exercised by the Commonwealth Court of Conciliation and Arbitration were divided between the Commonwealth Industrial Court and the Commonwealth Conciliation and Arbitration Commission respectively. Awards of the Conciliation and Arbitration Commission subsequently placed payment of sick pay, public holiday pay and annual leave under the administration of the Authority. Under amending legislation, which operated from 6 June 1961, the Authority became responsible for payment of long service leave to registered waterside workers, and its disciplinary powers were strengthened to reduce the time lost through unauthorised stoppages. Further amending legislation which operated from 8 October 1965 made the Authority responsible for the recruitment of waterside workers. In July 1970, by legislative amendment, the management and union positions on the Authority were abolished. The functions of the Authority are now exercised by one full-time Director.

In October 1965 the Government invited the Australian Council of Trade Unions, the Waterside Workers' Federation of Australia, the Association of Employers of Waterside Labour, the Australian Stevedoring Industry Authority and the Department of Labour and National Service to confer under the Chairmanship of Mr A. E. Woodward, Q.C., with the overall objective of improving the long-term conditions in the stevedoring industry. Following a series of meetings, the Conference, known as the National Stevedoring Industry Conference, published a General Report in April 1967 recording agreement between the parties on a number of matters. These included *inter alia* weekly hire for all registered waterside workers in major ports, together with a pension scheme and provision for reducing the statutory retirement age progressively from seventy to sixty-five years of age. Special arrangements have been agreed to cover any prospective redundancy problems. After the Report had been adopted by all the parties, including the Government, enabling legislation in the form of the *Stevedoring Industry (Temporary Provisions) Act 1967* was introduced to allow the changes to be implemented. Permanent employment was commenced in Sydney on 27 November 1967. In Melbourne, Port Kembla, Adelaide, Fremantle and Brisbane permanent arrangements were introduced on the following respective dates in 1968—8 January, 19 February, 4 March, 18 March and 12 August. Newcastle was brought into the scheme on 10 March 1969 and Whyalla on 6 July 1970. The operation of the *Stevedoring Industry (Temporary Provisions) Act* has been twice extended (in 1970 and 1972) and is currently due to expire on 1 July 1973.

In July 1970 the National Stevedoring Industry Conference was given statutory backing and re-designated the Stevedoring Industry Council. The Council is constituted along the same lines as the National Stevedoring Industry Conference. Its functions are primarily to advise the Minister for Labour on the operation of the existing employment arrangements, the development of new employment schemes and such other matters as the Minister refers to it. It is also required to endeavour to bring about amicable agreement in relation to industrial questions in the industry.

The statutory provisions relating to the industry are now contained in the *Stevedoring Industry (Temporary Provisions) Act 1967–1972* (and Regulations made thereunder), the *Stevedoring Industry Act 1956–1971*, Division 4 of Part III of the *Conciliation and Arbitration Act 1904–1972*, and the *Stevedoring Industry Act 1965*.

### Restrictive Trade Practices Act 1971-1972 (Part XII—Overseas Cargo Shipping)

The Overseas Cargo Shipping provisions of the Restrictive Trade Practices Act are administered by the Minister for Transport.

The legislation is an extension of similar provisions previously enacted under the *Trade Practices Act 1965–1969* (now repealed) and the *Restrictive Trade Practices Act 1971* (as amended).

The object of the Overseas Cargo Shipping provisions is the control of the operations of shipping conferences (associations into which shipowners have traditionally combined) and of individual shipowners in relation to the carriage of goods by sea from Australia to other countries. To achieve



that object the provisions are designed to facilitate negotiations between shipowners and 'The Australian Shippers' Council', an association, designated under the Act by the Minister, that represents the interests of shippers and producers of goods exported from Australia. The Council has taken over the separate roles of the 'shipper bodies' that were set up under previous legislation (one particular body for each of five trades) and is able to represent all shippers and producers in all outward trades.

Regarding shipping conferences, the provisions require certain agreements of a specified character between shipowners operating in the outward trades from Australia to be filed with the Clerk of Shipping Agreements. A shipowner who is a party to such an agreement may be requested, by the Minister, to give to the Minister an undertaking to negotiate with the Council with regard to the arrangements for, and the terms and conditions that are applicable to, cargo shipping to which the agreement relates. Whether such a shipowner has failed so to negotiate or whether the services provided pursuant to the agreement are adequate, efficient or economical, are matters that may be referred by the Minister for enquiry and report by the Trade Practices Tribunal. Certain powers are vested in the Governor-General to disapprove the agreement after consideration of a report by the Tribunal to the Minister. A probable effect of such a disapproval would be to force a shipowner party to the agreement to carry on its business in the absence of any agreement with other shipowners. The Governor-General may, however, in his discretion approve such a shipowner entering into another agreement.

Provisions, similar to the provisions in respect of shipping conferences, apply in respect of individual shipowners. In addition, an individual shipowner may, as a result of a declaration by the Governor-General, be prohibited from engaging in certain specified activities in carrying on its business, for example engaging in freight cutting with the object of substantially damaging the business of another shipowner.

The provisions also secure reasonable rights for Australian flag operators in respect of the operation of their vessels in trades from Australia.

## Collection and presentation of statistics

### Basic documents

From 1 July 1966 shipping statistics have been compiled by the Commonwealth Bureau of Census and Statistics from returns submitted by shipping companies or their representatives to Customs Houses at the various seaports throughout Australia. A return is required for the departure of a vessel from a port as well as for its arrival at that port and shows the following details:

- name of the port at which the return is submitted;
- name of vessel;
- type of shipping service (liner, tramp, bulkship, tanker);
- port registered;
- registered net tonnage;
- last port of call (arrival) or next port of call (departure);
- with cargo or in ballast;
- date of arrival or date of departure;
- ports of loading of cargo (arrival) or ports of discharge of cargo (departure);
- quantity of cargo for each port of loading or discharge.

Prior to 1 July 1966, returns were completed by officers of the Department of Customs and Excise at each port, the major differences then being that the system did not, in the main, rely on information supplied direct by shipping companies or their representatives, and the detail on returns did not include information on type of shipping service or ports of loading and discharge of cargo.

### Scope of the statistics

Arrivals and departures of vessels are treated separately in shipping statistics. Not all vessels are included in the statistics as returns are not required for (i) naval vessels; (ii) yachts and other craft used for pleasure; (iii) foreign fishing vessels that neither load nor discharge cargo; (iv) Australian registered fishing vessels operating from Australian ports; (v) geographical survey vessels, seismic survey vessels, oceanographic survey vessels; (vi) offshore oil drilling rigs and vessels servicing them; (vii) vessels of 200 registered net tons and under.



**Period covered by the statistics**

Monthly shipping statistics relate to vessels arriving at and departing from each port in a calendar month. Annual statistics are published on a financial year basis.

**Statistics of vessels**

Statistics of vessels are compiled in terms of registered net tonnages. Net tonnage is expressed in units of 100 cubic feet (i.e. 100 cu ft equals 1 ton) and represents the volume of enclosed space which can be utilised for cargo or passengers.

**Statistics of vessel movements**

Returns show the last or next port of call of a vessel according to whether an arrival or departure at a port is being reported. Each vessel is classified to either the overseas or the coastal fleets serving Australia. This information, supplemented by the voyage of the vessel indicated by ports it visits to load or discharge cargo, is the basis on which each vessel movement is allocated to one of the following classifications: overseas direct; overseas via other States; interstate direct; interstate via ports in the same State; intrastate.

**Cargo loaded or discharged**

Returns for arrivals show cargo discharged, and for departures cargo loaded, in terms of units of weight or in terms of units of measurement, depending on the basis on which freight is charged. A ton measurement is a unit of 40 cubic feet. Cargo statistics show separate figures for cargo recorded in tons weight and cargo recorded in tons measurement.

**Type of service**

Overseas shipping cargo statistics are classified by type of service. Coastal shipping cargo statistics, on the other hand, combine all service types.

For overseas shipping, cargo shipped in liners is shown separately from cargo shipped in tramps, bulkships and tankers. A liner is a vessel which, on the voyage on which cargo is loaded or discharged at an Australian port, is operated by a common carrier in providing services on a specified route on a relatively regular basis.

Statistics of cargo shipped in liner services do not necessarily provide a measure of cargo carried by ships operating under shipping conference arrangements. For example, liner services may be provided by shipping companies which are not parties to conference agreements. Cargo may also be shipped under shipping conference conditions in vessels operating on a voyage charter basis for specific cargo, and, in the statistics, such cargo is classified as cargo shipped in tramp vessels.

**Country of loading or discharge of overseas cargo**

In statistics of overseas shipping cargo, country of loading or discharge of cargo is the country of location of the port where the cargo was loaded on to, or is to be discharged from, a reporting vessel. The countries shown are not necessarily the countries of origin or ultimate destination of cargo because previous or subsequent transshipments of cargo are not taken into account. The statistics of cargo classified by the country in which it was loaded or discharged cannot therefore be compared directly with statistics of overseas trade classified by country of origin or consignment.

**Transshipments of cargo within Australia**

The State of loading or discharge shown in the statistics is the State in which cargo is loaded onto, or discharged from, reporting vessels. Cargo loaded in a given State can therefore include cargo previously shipped interstate, while cargo discharged can include cargo which would subsequently be shipped interstate.

## Overseas shipping

## Total movement

The following table shows the number of entrances and clearances (combined) of vessels from and to overseas countries, and the aggregate net tonnage, during each of the years 1967-68 to 1971-72.

**OVERSEAS SHIPPING: ENTRANCE AND CLEARANCES (COMBINED) OF  
VESSELS DIRECT, AUSTRALIA 1967-68 TO 1971-72(a)**

	1967-68	1968-69	1969-70	1970-71	1971-72
Number of vessels . . . . .	7,985	8,750	10,022	11,054	10,886
Net tonnage . . . '000 tons	60,387	72,578	89,058	102,219	106,636

(a) Excludes vessels of 200 net tons and under.

Particulars of the total overseas movement of shipping for each year from 1822 to 1920-21 were published in Year Book No. 15, page 507, those for each year from 1921-22 to 1950-51 in Year Book No. 40, page 97, while those for each year from 1944-45 are shown in the Statistical Summary of this Year Book.

## Total overseas shipping

The following table shows, for each State and the Northern Territory, the number of entrances and clearances of vessels direct from and to overseas countries, and the aggregate net tonnage, during the year 1971-72.

**OVERSEAS SHIPPING: ENTRANCES AND CLEARANCES OF VESSELS DIRECT, STATES  
AND NORTHERN TERRITORY, 1971-72(a)**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances . . . number	1,420	532	1,114	289	1,754	117	213	5,439
'000 net tons	12,482	3,393	9,486	2,287	23,000	1,208	1,288	53,144
Clearances . . . number	1,156	539	1,306	337	1,810	118	181	5,447
'000 net tons	10,378	4,449	10,697	2,111	23,303	1,364	1,189	53,492

(a) Excludes vessels of 200 net tons and under.

## Country of registration of overseas shipping

Particulars of overseas shipping which entered Australian ports during each of the years 1969-70 to 1971-72 are given in the following table according to country of registration of vessels.

**OVERSEAS SHIPPING: ENTRANCES DIRECT, BY COUNTRY OF REGISTRATION OF VESSELS  
AUSTRALIA, 1969-70 TO 1971-72(a)**  
(<sup>'000</sup> net tons)

<i>Vessels registered at ports in—</i>	1969-70	1970-71	1971-72	<i>Vessels registered at ports in—</i>	1969-70	1970-71	1971-72
Australia . . . . .	490	446	529	Panama . . . . .	1,134	1,156	1,042
Denmark . . . . .	555	569	492	Sweden . . . . .	724	1,027	887
France . . . . .	786	552	669	United Kingdom . . . . .	8,923	8,632	8,972
Germany, Federal Republic of . . . . .	1,068	932	1,388	United States of America . . . . .	300	394	300
Greece . . . . .	2,493	3,953	3,068	Other countries . . . . .	2,443	2,851	3,634
Hong Kong . . . . .	360	459	566				
India . . . . .	459	692	684	All countries—			
Italy . . . . .	663	694	639	In cargo . . . . .	20,043	17,571	17,655
Japan . . . . .	9,640	11,868	14,780	Proportion of total % . . . . .	45.0	34.6	33.2
Liberia . . . . .	8,570	10,543	9,501	In ballast . . . . .	24,452	33,249	35,489
Netherlands . . . . .	1,280	1,078	1,086	Proportion of total % . . . . .	55.0	65.4	66.8
New Zealand . . . . .	330	337	325				
Norway . . . . .	4,277	4,617	4,582	Grand total . . . . .	44,495	50,820	53,144

(a) Excludes vessels of 200 net tons and under.

Australian registered tonnage which entered Australian ports from overseas during the year 1971-72 represented 0.99 per cent of the total tonnage entered.

## Interstate shipping

### Interstate movement

*Interstate direct.* The following table shows the number of entrances and the net tonnage of coastal vessels recorded into each State and the Northern Territory from any other State during 1971-72. The statistics below are not comparable with those for years prior to 1969-70 because the method of applying the classifications 'overseas' and 'interstate' has been changed. Before July 1969 movements of overseas vessels carrying cargo between two Australian States were classified as 'interstate direct' and were, therefore, included in these statistics. Since July 1969 overseas vessels carrying cargo between two Australian States have been classified as 'overseas via States' and are, therefore, excluded from these statistics. The difference in treatment arose from the practice of classifying movements between two Australian States on the basis of port of loading and port of discharge, whereas the current method classifies these movements on the basis of whether the vessel is considered to be an overseas or a coastal one. Total interstate movements by coastal and overseas vessels are shown in *Total interstate movements* below.

#### INTERSTATE MOVEMENT: ENTRANCES OF COASTAL VESSELS INTERSTATE DIRECT STATES AND NORTHERN TERRITORY, 1971-72(a)

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Number of vessels	.	1,249	1,516	397	610	258	1,370	91	5,491
Net tonnage	'000 tons	7,890	7,027	2,606	3,674	2,231	3,285	309	27,021

(a) Excludes vessels of 200 net tons and under.

*Overseas via States.* The figures in the following table show the number and aggregate net tonnage of entrances and clearances of overseas vessels which, having arrived at an Australian port direct from an overseas port, continue their voyages from/to overseas countries via other Australian States. The statistics in the following table are not comparable with those prior to 1 July 1969 because of the change in method of classifying some overseas vessel movements referred to under *Interstate direct*, see above.

#### INTERSTATE MOVEMENT: ENTRANCES AND CLEARANCES OF VESSELS OVERSEAS VIA OTHER AUSTRALIAN STATES AND NORTHERN TERRITORY, 1971-72(a)

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances	number	1,690	1,503	1,313	780	934	331	86	6,637
	'000 net tons	9,523	10,923	6,028	4,478	6,063	1,842	258	39,116
Clearances	number	1,971	1,496	1,128	738	882	335	122	6,672
	'000 net tons	11,767	9,810	4,846	4,889	5,913	1,698	406	39,328

(a) Excludes vessels of 200 net tons and under.

*Total interstate movement.* The following table shows, for each State and the Northern Territory, the total number of entrances and clearances of vessels from and for other States during the year 1971-72 together with the aggregate net tonnage.

#### INTERSTATE MOVEMENT: TOTAL ENTRANCES AND CLEARANCES STATES AND NORTHERN TERRITORY, 1971-72(a)

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances	number	2,939	3,019	1,710	1,390	1,192	1,701	177	12,128
	'000 net tons	17,413	17,950	8,637	8,151	8,295	5,127	567	66,140
Clearances	number	3,209	3,023	1,516	1,346	1,139	1,699	214	12,146
	'000 net tons	19,566	16,879	7,382	8,317	8,406	4,967	710	66,228

(a) Excludes vessels of 200 net tons and under.



The following table shows the total interstate movement of shipping, including overseas vessels travelling overseas via States, for Australia for each of the years 1967-68 to 1971-72.

**INTERSTATE MOVEMENT: TOTAL ENTRANCES AND CLEARANCES  
AUSTRALIA, 1967-68 TO 1971-72(a)**

		1967-68	1968-69	1969-70	1970-71	1971-72
Entrances	number	10,595	10,830	10,843	12,169	12,128
	'000 net tons	44,588	47,005	53,732	65,141	66,140
Clearances	number	10,566	10,824	10,781	12,113	12,146
	'000 net tons	44,529	47,070	53,523	64,843	66,228

(a) Excludes vessels of 200 net tons and under.

**Australian trading vessels**

The following table shows particulars of all Australian trading vessels of 200 gross tons or more engaged in the regular overseas, interstate or intrastate services at 30 June 1972.

**AUSTRALIAN TRADING VESSELS OF 200 GROSS TONS OR MORE  
30 JUNE 1972**

(Source: Department of Transport)

<i>Vessels</i>	<i>Number</i>	<i>Dead-weight tons</i>	<i>Gross tons</i>
Interstate vessels—			
Australian-owned, Australian-registered . . . . .	71	929,215	668,382
Overseas-owned, Australian-registered, engaged in Australian coastal trade—			
New Zealand-owned. . . . .	7	21,561	19,305
Other . . . . .	7	230,055	144,159
Overseas-owned, overseas-registered, on charter, engaged in Australian coastal trade . . . . .	11	310,861	187,569
Total interstate vessels . . . . .	96	1,491,692	1,019,415
Intrastate vessels . . . . .	28	180,192	120,508
Total coastal trading vessels . . . . .	124	1,671,884	1,139,923
Overseas trading vessels—			
Australian-owned, Australian-registered operated mainly on overseas services . . . . .	6	78,599	60,397
Australian-owned, overseas-registered operated wholly on overseas services . . . . .	3	24,664	19,677
Total overseas trading vessels . . . . .	9	103,263	80,074
Total Australian trading vessels . . . . .	133	1,775,147	1,219,997

### Shipping at principal ports

For details of Harbour Boards and Trusts in each State *see* the chapter Public Authorities Finance.

The following table shows the total volume of shipping—overseas and coastal—which entered the principal ports of Australia during the years 1970-71 and 1971-72.

#### TOTAL SHIPPING: ENTRANCES AT PRINCIPAL PORTS, AUSTRALIA 1970-71 AND 1971-72(a)

Port of entry	1970-71		1971-72		Port of entry	1970-71		1971-72	
	Num-ber	Net tons	Num-ber	Net tons		Num-ber	Net tons	Num-ber	Net tons
		'000		'000			'000		'000
New South Wales—					Western Australia—				
Sydney(b)	3,883	19,552	3,652	19,562	Fremantle(d)	1,388	9,403	1,524	11,657
Newcastle	1,359	7,699	1,197	7,460	Albany	168	967	167	1,021
Port Kembla	874	5,184	932	5,818	Bunbury	156	807	138	776
Victoria—					Carnarvon	16	24	20	32
Melbourne	2,818	13,710	2,823	14,003	Geraldton	125	776	123	791
Geelong	554	4,640	559	4,412	Yampi	172	1,457	149	1,315
Queensland—					Port Hedland	592	8,155	546	8,718
Brisbane	1,508	7,938	1,469	8,144	Dampier	475	6,918	396	6,522
Bowen	19	69	34	123	Tasmania—				
Cairns	160	524	176	524	Hobart	600	1,636	612	1,730
Gladstone	375	4,799	372	5,179	Burnie	388	1,390	425	1,542
Mackay	208	754	242	977	Devonport	467	958	493	1,048
Rockhampton	129	552	134	559	Launceston	488	1,591	468	1,614
Townsville	337	1,338	370	1,528	Port Latta	39	799	40	754
Weipa	286	3,191	279	3,326	Northern Territory—				
South Australia—					Darwin	230	1,006	232	979
Adelaide(c)	1,270	5,218	1,263	6,116	Groote Island	68	319	82	408
Port Lincoln	190	781	110	668					
Port Pirie	213	1,331	183	899					
Rapid Bay	41	156	31	124					
Walleroo	40	245	29	179					
Whyalla	289	3,021	276	2,565					

(a) Excludes vessels of 200 net tons and under. (b) Includes Botany Bay. (c) Includes Port Stanvac. (d) Includes Kwinana.

### Shipping cargo

#### Overseas and interstate cargo

The table on page 340 shows the aggregate tonnage of overseas and interstate cargo discharged and shipped at principal Australian ports.

#### CARGO DISCHARGED AND SHIPPED: AUSTRALIA, 1967-68 TO 1971-72 (<sup>0</sup>000 tons)

Year	Overseas cargo				Interstate cargo			
	Discharged		Shipped		Discharged		Shipped	
	Weight	Meas.	Weight	Meas.	Weight	Meas.	Weight	Meas.
1967-68	27,572	4,684	41,339	2,102	16,980	2,079	17,207	1,876
1968-69	29,298	5,212	54,956	2,054	18,158	2,161	18,511	1,932
1969-70	28,201	5,159	76,849	2,127	20,308	2,248	20,478	2,030
1970-71	21,410	5,069	100,210	2,612	23,789	2,403	24,540	2,194
1971-72	19,197	5,178	106,340	2,791	25,393	2,725	25,970	2,471

## CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1971-72

('000 tons)

Port	Overseas cargo				Interstate cargo			
	Discharged		Shipped		Discharged		Shipped	
	Weight	Meas.	Weight	Meas.	Weight	Meas.	Weight	Meas.
<b>New South Wales—</b>								
Sydney . . . . .	2,141	1,962	5,218	940	2,421	229	283	272
Botany Bay . . . . .	1,716	..	75	..	2,984	..	67	..
Newcastle . . . . .	859	6	8,236	14	3,148	1	1,063	11
Port Kembla . . . . .	479	2	3,466	..	5,700	..	1,647	..
Other . . . . .	..	..	195	..	34	..	2	..
<i>Total New South Wales</i>	<i>5,195</i>	<i>1,970</i>	<i>17,188</i>	<i>954</i>	<i>14,287</i>	<i>231</i>	<i>3,061</i>	<i>283</i>
<b>Victoria—</b>								
Melbourne . . . . .	1,980	2,291	1,685	1,000	1,495	980	854	1,035
Geelong . . . . .	1,970	1	2,301	18	982	1	573	5
Portland . . . . .	209	..	508	..	29	..	1	..
Westernport . . . . .	420	..	1,096	..	5	8	7,470	3
Other . . . . .	..	..	..	..	..	..	..	..
<i>Total Victoria</i>	<i>4,579</i>	<i>2,292</i>	<i>5,591</i>	<i>1,018</i>	<i>2,510</i>	<i>989</i>	<i>8,899</i>	<i>1,042</i>
<b>Queensland—</b>								
Brisbane . . . . .	834	355	1,540	154	2,877	133	156	90
Cairns . . . . .	21	..	369	..	17	1	1	1
Gladstone . . . . .	513	..	7,862	..	33	..	263	..
Mackay . . . . .	40	2	746	..	13	..	69	..
Townsville . . . . .	60	13	806	1	63	1	163	..
Other . . . . .	37	..	8,000	2	10	2	752	..
<i>Total Queensland</i>	<i>1,505</i>	<i>370</i>	<i>19,329</i>	<i>157</i>	<i>3,013</i>	<i>136</i>	<i>1,406</i>	<i>91</i>
<b>South Australia—</b>								
Port Adelaide . . . . .	307	210	799	122	751	17	279	9
Ardrossan . . . . .	..	..	180	..	..	..	336	..
Port Lincoln . . . . .	33	..	593	1	32	..	327	..
Port Pirie . . . . .	24	..	678	..	184	..	280	..
Port Stanvac . . . . .	1,559	..	14	..	426	..	559	..
Rapid Bay . . . . .	..	..	..	..	1	..	38	..
Whyalla . . . . .	96	..	1,336	..	888	..	4,218	..
Other . . . . .	26	..	893	18	7	..	459	..
<i>Total South Australia</i>	<i>2,045</i>	<i>210</i>	<i>4,494</i>	<i>140</i>	<i>2,289</i>	<i>17</i>	<i>6,496</i>	<i>9</i>
<b>Western Australia—</b>								
Fremantle . . . . .	899	252	4,189	293	999	5	940	13
Albany . . . . .	137	..	645	2	..	..	..	..
Bunbury . . . . .	138	..	721	29	..	..	..	..
Dampier . . . . .	206	5	18,632	..	18	11	50	..
Geraldton . . . . .	58	..	1,249	17	..	..	..	..
Kwinana . . . . .	3,340	..	193	..	234	..	433	..
Port Hedland . . . . .	25	11	24,631	..	5	2	1,206	..
Yampi . . . . .	..	..	1,765	..	86	..	1,186	..
Other . . . . .	237	32	2,526	17	27	14	924	1
<i>Total Western Australia</i>	<i>5,039</i>	<i>301</i>	<i>54,550</i>	<i>358</i>	<i>1,370</i>	<i>32</i>	<i>4,738</i>	<i>14</i>
<b>Tasmania—</b>								
Hobart . . . . .	142	12	154	118	676	220	463	160
Burnie . . . . .	77	1	141	14	239	204	361	143
Launceston . . . . .	83	1	46	25	722	262	136	175
Port Latta . . . . .	14	..	2,113	..	21	..	..	..
Other . . . . .	52	2	420	6	138	506	209	523
<i>Total Tasmania</i>	<i>369</i>	<i>16</i>	<i>2,874</i>	<i>163</i>	<i>1,797</i>	<i>1,192</i>	<i>1,170</i>	<i>1,001</i>
<b>Northern Territory—</b>								
Darwin . . . . .	258	14	828	..	86	16	14	2
Groote Island . . . . .	2	..	630	..	18	1	185	..
Gove . . . . .	205	7	857	1	24	112	1	29
Other . . . . .	..	..	..	..	..	..	..	..
<i>Total Northern Territory</i>	<i>465</i>	<i>20</i>	<i>2,315</i>	<i>1</i>	<i>127</i>	<i>129</i>	<i>200</i>	<i>31</i>
<b>Australia</b>	<b>19,197</b>	<b>5,178</b>	<b>106,340</b>	<b>2,791</b>	<b>25,393</b>	<b>2,725</b>	<b>25,970</b>	<b>2,471</b>



**Overseas cargo according to major trade areas and type of service**

The following two tables show for the years 1969-70 to 1971-72 particulars of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas, classified according to the major trade areas of the world, by type of shipping service (i.e. liner or tramp, bulkship and tanker).

**CARGO LOADED IN AUSTRALIA FOR DISCHARGE OVERSEAS: MAJOR TRADE AREAS  
BY TYPE OF SERVICE: 1969-70 TO 1971-72**  
(<sup>'000 tons</sup>)

<i>Major trade areas</i>	<i>Liners (a)</i>		<i>Tramps, bulk ships, tankers</i>		<i>All vessels</i>	
	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>
<b>North America and Hawaii—</b>						
1969-70 . . . . .	649	123	3,240	1	3,890	124
1970-71 . . . . .	542	160	4,056	6	4,598	166
1971-72 . . . . .	586	176	4,456	24	5,042	200
<b>South America—</b>						
1969-70 . . . . .	50	6	427	..	477	6
1970-71 . . . . .	52	11	541	..	593	11
1971-72 . . . . .	40	5	618	..	658	5
<b>Europe—</b>						
1969-70 . . . . .	1,363	509	9,100	11	10,462	520
1970-71 . . . . .	1,123	538	14,861	..	15,984	538
1971-72 . . . . .	1,176	498	15,707	51	16,883	550
<b>Africa—</b>						
1969-70 . . . . .	238	99	370	15	608	114
1970-71 . . . . .	201	102	1,953	1	2,154	103
1971-72 . . . . .	168	91	2,550	7	2,719	98
<b>Asia—</b>						
<b>Eastern Asia—</b>						
1969-70 . . . . .	1,490	193	54,960	..	56,450	193
1970-71 . . . . .	1,148	392	70,004	10	71,152	402
1971-72 . . . . .	1,039	369	74,655	36	75,694	405
<b>Other Asia—</b>						
1969-70 . . . . .	919	378	2,291	62	3,210	439
1970-71 . . . . .	755	374	3,065	120	3,820	494
1971-72 . . . . .	737	386	2,862	231	3,600	617
<b>Total Asia—</b>						
1969-70 . . . . .	2,409	570	57,251	62	59,660	632
1970-71 . . . . .	1,903	766	73,069	130	74,972	896
1971-72 . . . . .	1,777	755	77,517	268	79,294	1,023
<b>Papua New Guinea, New Zealand and Pacific Islands—</b>						
1969-70 . . . . .	708	666	1,017	59	1,725	724
1970-71 . . . . .	578	840	1,301	52	1,879	892
1971-72 . . . . .	517	829	1,199	79	1,716	908
<b>Indian Ocean Is. and Antarctic Area—</b>						
1969-70 . . . . .	..	..	26	6	26	7
1970-71 . . . . .	..	..	29	5	29	5
1971-72 . . . . .	..	..	29	7	29	7
<b>Total loaded</b>						
1969-70 . . . . .	5,417	1,973	71,432	154	76,849	2,127
1970-71 . . . . .	4,399	2,417	95,810	194	100,210	2,612
1971-72 . . . . .	4,264	2,354	102,076	437	106,340	2,791

(a) Cargo and passenger liners.

**CARGO DISCHARGED IN AUSTRALIA FROM OVERSEAS: MAJOR TRADE AREAS  
BY TYPE OF SERVICE: 1969-70 TO 1971-72**

('000 tons)

Major trade areas	Liners(a)		Tramps, bulk-ships, tankers		All vessels	
	Weight	Meas.	Weight	Meas.	Weight	Meas.
<b>North America and Hawaii—</b>						
1969-70 . . . .	406	619	1,361	376	1,768	994
1970-71 . . . .	457	612	1,309	366	1,766	978
1971-72 . . . .	362	628	1,444	356	1,806	984
<b>South America—</b>						
1969-70 . . . .	13	3	19	..	32	3
1970-71 . . . .	36	3	11	..	47	3
1971-72 . . . .	24	2	16	..	40	2
<b>Europe—</b>						
1969-70 . . . .	623	1,811	150	195	774	2,007
1970-71 . . . .	623	1,623	148	156	771	1,779
1971-72 . . . .	573	1,532	177	118	750	1,650
<b>Africa—</b>						
1969-70 . . . .	120	56	106	..	226	56
1970-71 . . . .	106	57	164	..	270	57
1971-72 . . . .	91	70	69	..	161	71
<b>Asia—</b>						
<b>Eastern Asia—</b>						
1969-70 . . . .	374	1,050	995	227	1,369	1,277
1970-71 . . . .	471	1,057	1,523	280	1,994	1,337
1971-72 . . . .	417	1,143	1,552	345	1,968	1,488
<b>Other Asia—</b>						
1969-70 . . . .	155	431	20,956	57	21,110	488
1970-71 . . . .	128	431	14,047	66	14,175	497
1971-72 . . . .	134	411	12,356	90	12,490	501
<b>Total Asia—</b>						
1969-70 . . . .	528	1,481	21,951	285	22,479	1,765
1970-71 . . . .	599	1,488	15,570	346	16,169	1,834
1971-72 . . . .	550	1,554	13,908	435	14,459	1,989
<b>Papua New Guinea, New Zealand and Pacific Islands—</b>						
1969-70 . . . .	318	323	1,813	9	2,131	332
1970-71 . . . .	300	389	1,457	29	1,757	418
1971-72 . . . .	219	410	1,231	71	1,449	482
<b>Indian Ocean Is. and Antarctic Area—</b>						
1969-70 . . . .	..	..	791	2	791	2
1970-71 . . . .	..	..	629	..	629	..
1971-72 . . . .	..	..	532	1	532	1
<b>Total discharged</b>						
1969-70 . . . .	2,008	4,293	26,193	866	28,201	5,159
1970-71 . . . .	2,121	4,172	19,288	897	21,410	5,069
1971-72 . . . .	1,819	4,196	17,378	982	19,197	5,178

(a) Cargo and passenger liners.

**Overseas cargo according to country of registration of vessels**

The following table shows the total overseas cargo, discharged and shipped combined, according to the country in which the vessels were registered, during each of the years 1969-70 to 1971-72.

**OVERSEAS CARGO DISCHARGED AND SHIPPED, BY COUNTRY OF REGISTRATION OF  
VESSELS: AUSTRALIA, 1969-70 TO 1971-72**  
(<sup>'000 tons</sup>)

<i>Vessels registered at ports in</i>	1969-70		1970-71		1971-72	
	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>
Australia . . . . .	823	206	649	384	648	461
Denmark . . . . .	1,340	84	1,234	121	991	133
France . . . . .	1,514	109	1,134	69	1,339	138
Germany, Federal Republic of . . . . .	2,147	413	1,812	471	2,623	497
Greece . . . . .	5,799	180	9,395	108	7,048	131
Hong Kong . . . . .	716	106	935	61	1,264	58
India . . . . .	1,175	71	1,526	83	1,608	69
Italy . . . . .	643	61	989	57	940	51
Japan . . . . .	30,071	697	35,708	900	44,397	798
Liberia . . . . .	21,622	199	27,142	224	23,104	249
Netherlands . . . . .	2,488	375	2,176	310	2,128	301
New Zealand . . . . .	662	468	560	658	452	749
Norway . . . . .	11,069	442	11,469	450	11,541	378
Panama . . . . .	2,406	43	2,811	47	2,173	81
Sweden . . . . .	1,592	495	2,485	502	2,098	529
United Kingdom . . . . .	15,248	2,797	15,167	2,425	16,133	2,545
United States of America . . . . .	333	171	588	190	292	177
Other . . . . .	5,402	370	5,840	621	6,758	625
<b>Grand total . . . . .</b>	<b>105,050</b>	<b>7,285</b>	<b>121,620</b>	<b>7,681</b>	<b>125,537</b>	<b>7,969</b>

### World shipping tonnage

At 1 July 1972 the total number of steamships and motorships 100 gross tons and upwards throughout the world was 57,391 with a gross tonnage of 268,340,145. Of those totals, steamships numbered 6,799 for 94,974,167 gross tons, and motorships 50,592 for 173,365,978 gross tons. This includes 6,462 oil tankers of 100 gross tons and upwards with a gross tonnage of 105,128,937. Australian steamships and motorships, 370 for 1,184,010 gross tons constituted 0.67 per cent and 0.44 per cent respectively of the total number and gross tonnage. This information has been derived from *Lloyd's Register of Shipping*.

### Vessels registered in Australia

The following table shows the number and gross tonnage of trading vessels of 200 tons and over registered in Australia at 30 June 1972, classified according to: (i) year of construction, (ii) type of trade in which the vessels were engaged and (iii) vessels built in Australian or in overseas shipyards.

#### AUSTRALIAN-REGISTERED TRADING VESSELS, 30 JUNE 1972(a)

(Source: Department of Transport)

<i>Year of construction</i>	<i>Overseas and interstate vessels</i>		<i>Intrastate vessels</i>		<i>Built in Australian yards</i>		<i>Built overseas</i>		<i>Total</i>	
	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>
1968 and earlier . . . . .	74	677,320	21	56,103	56	480,108	39	253,315	95	733,423
1969 . . . . .	7	79,805	1	32,404	6	77,735	2	34,474	8	112,209
1970 . . . . .	5	62,144	..	..	4	52,814	1	9,330	5	62,144
1971 . . . . .	3	55,364	1	357	2	39,416	2	16,305	4	55,721
1972(b) . . . . .	2	17,610	..	..	2	17,610	..	..	2	17,610
<b>Total registered in Australia . . . . .</b>	<b>91</b>	<b>892,243</b>	<b>23</b>	<b>88,864</b>	<b>70</b>	<b>667,683</b>	<b>44</b>	<b>313,424</b>	<b>114</b>	<b>981,107</b>

(a) 200 gross tons and over. (b) 1972 figures are as at 30 June 1972. Previous years are on a calendar year basis.



## Miscellaneous

### Shipping freight rates

Lists of shipping freight rates for selected commodities are shown in the *Quarterly Summary of Australian Statistics*.

### Shipping casualties

Courts of Marine Inquiry are constituted by a magistrate assisted by skilled assessors, and, when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault. Particulars of shipping losses and casualties reported on or near the coast during each of the years 1967-68 to 1971-72 are shown in the table below.

### SHIPPING CASUALTIES TO OVERSEAS AND INTERSTATE STEAM AND MOTOR VESSELS(a) AUSTRALIA, 1967-68 TO 1971-72

Year	Shipping losses			Other shipping casualties			Total shipping casualties		
	Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost
1967-68	..	..	..	100	416,332	..	100	416,332	..
1968-69	..	..	..	105	434,028	..	105	434,028	..
1969-70	1	734	21	83	318,024	..	84	318,758	21
1970-71	..	..	..	79	451,196	2	79	451,196	2
1971-72	..	..	..	91	499,195	2	91	499,195	2

(a) Vessels over 50 net tons.

### Lighthouses; distances by sea; depth of water and tides at main ports

A list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power and visibility of each light will be found in *Transport and Communication*, Bulletin No. 62. (14.11).

The distances by sea between principal ports of Australia and some important ports in other countries which trade with Australia and the depths of water and tides at principal ports of Australia will be found in *Transport and Communication*, Bulletin No. 62.

## RAILWAYS

### Government railways

Government railways in Australia operate in all States and Territories and provide an important means of transportation. In 1971-72 a total of 87.3 million tons of freight were carried, an increase of 97.1 per cent over the 44.3 million tons carried in 1951-52. However, in the same twenty-year period the number of passengers carried (mostly within the suburban areas of Sydney and Melbourne) declined by 19.4 per cent from 501 millions in 1951-52 to 404 millions in 1971-72. The number of train miles run during 1971-72 (95.5 million) was only 2.2 per cent greater than in 1951-52, which is an indication of the trend towards heavier train loads with the more powerful motive power now available. Since the introduction of the first mainline diesel-electric locomotives in 1950 their numbers have increased greatly until at 30 June 1972 there were 1,360 throughout Australia. Diesel-electric locomotives during 1971-72 hauled 61 million train-miles, while steam locomotives hauled only 402 thousand train-miles.

### Railway development

The first steam-operated railway in Australia ran between Melbourne and Port Melbourne, a distance of two miles, and was opened on 12 September 1854. It was owned and operated by the Melbourne and Hobson's Bay Railway. Within a short time privately-owned railways opened in other States, but owing to the small volume of traffic available they were soon in financial difficulties and all were taken over by the respective State Governments. Under the policy of Government ownership and control the railway networks expanded until at 30 June 1941 there were 27,234 route-miles open for traffic in Australia. This was the greatest mileage ever recorded. Since the 1939-45

War many uneconomic branch lines have been closed. From 1 July 1948 to 30 June 1972 3,489 miles have been closed, the greatest lengths being in Western Australia (1,029 miles), Queensland (889 miles), and Victoria (623 miles). During this same period 1,338 miles of new railway were added to the networks. The following table sets out the route-miles of government railways in each State and Territory at various dates since 1855.

**GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, STATES AND TERRITORIES  
1855 TO 1972  
(Miles)**

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1855(a)	14	2	..	7	..	..	..	..	23
1861(a)	73	114	..	56	..	..	..	..	243
1871(a)	358	276	218	133	..	45	..	..	1,030
1881(a)	996	1,247	800	832	92	45	..	..	4,012
1891	2,182	2,763	2,195	1,666	198	351	145	..	9,500
1901	2,846	3,237	2,801	1,736	1,355	457	145	..	12,577
1911	3,762	3,523	3,868	1,935	2,376	470	145	..	16,079
1921	5,043	4,267	5,752	3,408	3,992	630	199	5	23,296
1931	6,247	4,514	6,529	3,725	4,634	665	317	5	26,636
1941	6,368	4,518	6,567	3,809	4,835	642	490	5	27,234
1951	6,354	4,445	6,560	3,805	4,682	613	490	5	26,954
1961	6,303	4,050	6,324	3,836	4,577	517	490	5	26,102
1968	6,265	4,012	5,825	3,780	4,269	500	490	5	25,146
1969	6,265	3,972	5,824	3,759	4,280	500	490	5	25,095
1970	6,294	3,962	5,813	3,714	4,282	500	490	5	25,060
1971	6,294	3,962	5,797	3,683	4,291	500	490	5	25,022
1972	6,294	3,950	5,940	3,622	4,254	500	490	5	25,055

(a) At 31 December.

One feature of the Australian government railways is the variety of gauges to which they are built. There are three principal gauges, 'broad' (5ft 3in), 'standard' (4ft 8½in), and 'narrow' (3ft 6in). Extensive route-mileages of 3ft 6in gauge railway were built in areas where traffic volumes were initially known to be small and where it was imperative to minimise the costs of construction. The following table shows the mileages open in each State and Territory at 30 June 1972 according to gauge.

**GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, BY GAUGE  
STATES AND TERRITORIES, 30 JUNE 1972  
(Miles)**

Gauge	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
5ft 3in	(a)204	(b)3,739	..	1,570	..	..	..	..	5,513
4ft 8½in	(c)6,090	202	69	(d)1,088	(e)904	..	..	(f)5	8,358
3ft 6in	..	..	5,841	(g)964	(h)3,350	500	(i)490	..	11,145
2ft 6in	..	9	..	..	..	..	..	..	9
2ft 0in	..	..	30	..	..	..	..	..	30
<b>Total</b>	<b>6,294</b>	<b>3,950</b>	<b>5,940</b>	<b>3,622</b>	<b>4,254</b>	<b>500</b>	<b>490</b>	<b>5</b>	<b>25,055</b>
Per 1,000 of population	1.35	1.11	3.21	3.06	4.06	1.27	5.45	0.03	1.94
Per 1,000 square miles	20.34	44.95	8.91	9.53	4.36	18.95	0.94	5.32	8.44

(a) Portion of Victorian Railway system. (b) Excludes 202 route-miles of 5ft 3in gauge which almost parallels the 4ft 8½in gauge line between Melbourne and the Murray River. (c) Includes 29 route-miles of 4ft 8½in gauge line from Broke Hill to Cockburn owned and operated by the South Australian Government Railways. (d) Comprises 654 miles of the Trans-Australian and 217 miles of the Central Australia Railway systems and 217 miles from Port Pirie to Cockburn. (e) Includes 454 miles of the Trans-Australian Railway system. (f) Australian Capital Territory Railway system. (g) Includes 367 miles of the Central Australia Railway system. (h) Excludes 248 miles of 3ft 6in gauge line which parallels the 4ft 8½in gauge line and 75 miles of 3ft 6in/4ft 8½in dual gauge line which are included in the 4ft 8½in gauge line. (i) Comprises 173 miles of the Central Australia and 317 miles of the North Australia Railway systems.

### Government railway systems

There are six separate State Government railway systems and one Commonwealth railway system. As the Commonwealth system includes mileages in South Australia and Western Australia, and the Victorian system extends into New South Wales, the system route-mileages shown in the following table do not represent mileages within each State and Territory. These are shown in the previous table. The route-mileage of each system open for traffic, according to gauge, at 30 June 1972 is shown in the following table.

**GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, BY GAUGE AND SYSTEM**  
30 JUNE 1972  
(Miles)

System	Gauge					Total
	5ft 3in	4ft 8½in	3ft 6in	2ft 6in	2ft 0in	
New South Wales	..	(a)6,061	..	..	..	6,061
Victoria	(b)3,943	202	..	9	..	4,154
Queensland	..	69	5,841	..	30	5,940
South Australia	1,570	246	597	..	..	2,413
Western Australia	..	450	(c)3,350	..	..	3,800
Tasmania	..	..	500	..	..	500
Commonwealth	..	1,330	857	..	..	2,187
<b>Australia</b>	<b>5,513</b>	<b>8,358</b>	<b>11,145</b>	<b>9</b>	<b>30</b>	<b>25,055</b>

(a) Includes 270 route-miles which are electrified. (b) Excludes 202 route-miles of 5ft 3in gauge line which almost parallels the 4ft 8½in gauge line between Melbourne and the Murray River. Includes 262 route-miles which are electrified. (c) Excludes 248 miles of 3ft 6in gauge line which parallels the 4ft 8½in gauge line and 74 miles of 3ft 6in/4ft 8½in dual gauge line which are included in the 4ft 8½in gauge line.

The New South Wales system is based on Sydney and extends throughout the State. The Victorian system based on Melbourne radiates throughout the State, extending into areas of southern New South Wales. The Queensland system extends along the coast from Brisbane to Cairns in the north, while branch lines extend inland from Brisbane and the larger coastal cities of Rockhampton and Townsville. The main South Australian system is in the South-east of the State, but an isolated narrow-gauge system operates in the Eyre Peninsula area. The railway system in Western Australia is established in the south-western section of the State, but extends north to Meekatharra and east to Kalgoorlie and Esperance. In Tasmania the main line connects Hobart and Launceston, and there are branch lines along the northern coast.

The Commonwealth Railways comprises four separate railways. The Trans-Australian Railway, extending from Port Pirie to Kalgoorlie, is of 4ft 8½in gauge, as is that part of the Central Australia Railway from Port Augusta (Sterling North) to Marree. A further extension of this railway from Marree to Alice Springs is of 3ft 6in gauge, as is the North Australia Railway from Darwin to Birdum. The Australian Capital Territory Railway from Queanbeyan to Canberra is of 4ft 8½in gauge. In this chapter particulars of the four Commonwealth railways are combined; however, particulars for each railway are shown separately in the annual bulletin *Transport and Communication*.

A graph showing the route-mileages and traffic of all Government railways from 1870 to 1971-72 appears on plate 28 on page 347.

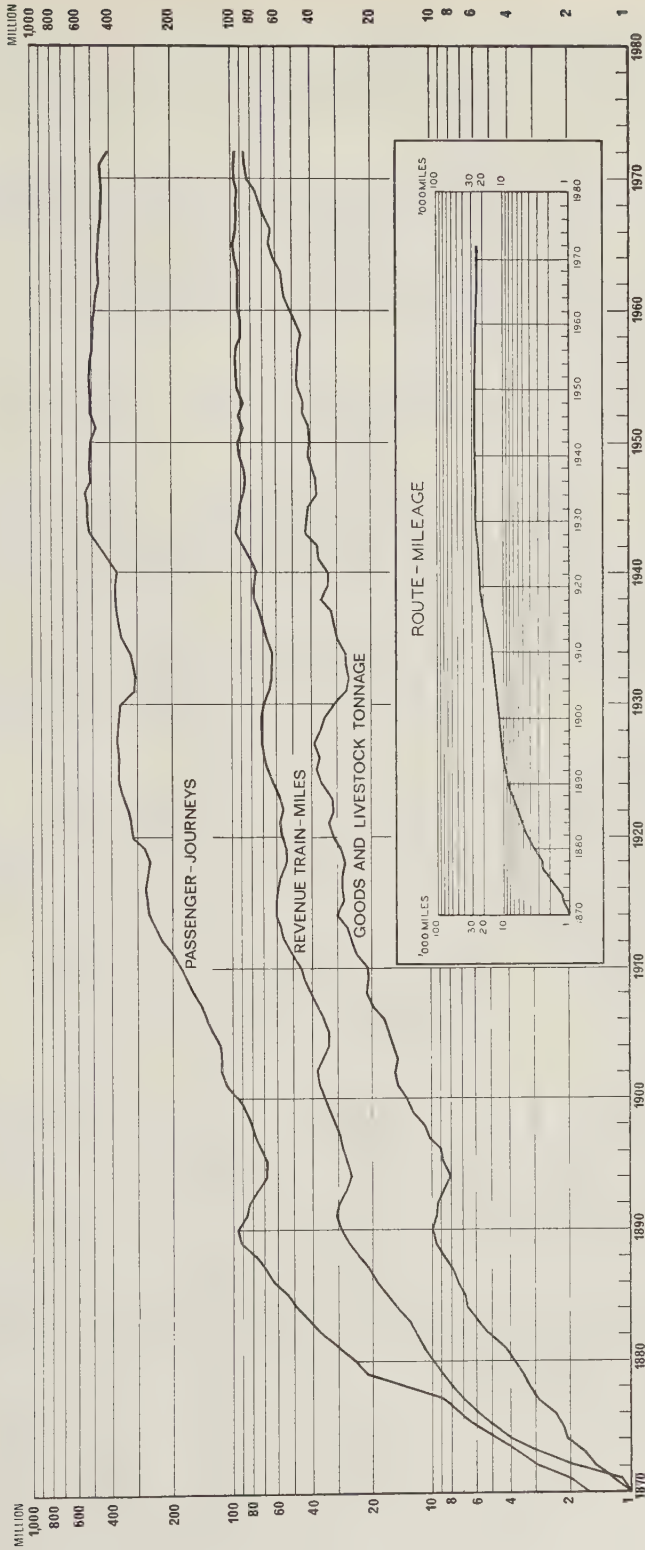
### Standardisation of railway gauges

Information about standardisation of railway gauges, completion and commencement dates of services and centres linked are given in Year Book No. 58, 1972, page 348.



GOVERNMENT RAILWAYS: AUSTRALIA, 1870 TO 1971-72  
ROUTE MILEAGE AND TRAFFIC

LOGARITHMIC GRAPH



NOTE - VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE ACTUAL NUMBERS ARE INDICATED BY SCALE

### Future developments in standardisation

The Commonwealth Government has announced its intention to finance a standard gauge connection between Adelaide and the new standard gauge railway. Details of the connection have yet to be decided. When this link is forged all mainland state capital cities will then be connected to the interstate standard gauge network. However, the direct link between Adelaide and Melbourne will still be broad gauge (5ft 3in).

A new standard gauge railway between Port Augusta and Whyalla (South Australia), 47 miles long, owned and operated by Commonwealth Railways was opened in October 1972. It connects Whyalla with the interstate standard gauge network. In addition to general goods and passenger traffic, it is used to transport considerable quantities of steel products to Melbourne and Sydney.

The Commonwealth Government has also approved a proposal for a new standard gauge railway, about 522 miles long, between Tarcoola on the Trans-Australian Railway, and Alice Springs to replace the existing narrow gauge railway between Marree and Alice Springs. Survey work has commenced.

The Western Australian Government has decided to convert to standard gauge the existing narrow gauge railway between Kalgoorlie and Esperance, a distance of about 258 miles.

### Operations of Government railway systems

Particulars of train-mileages, passenger-journeys, passenger-miles, freight tons carried, and freight ton-miles included in this section refer only to operations for which revenue is received.

#### Summary of operations

#### GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, SYSTEMS, 1971-72

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Cwlth</i>	<i>Aust.</i>
<b>Train-mileage</b>								
( <sup>'000</sup> )(a)—								
Suburban passenger	10,256	8,287	2,024	2,064	1,368	105	..	24,104
Country passenger	10,313	4,761	2,932	1,205	995	224	942	21,372
Goods(b)	17,444	7,566	13,166	2,957	5,348	769	2,793	50,043
<b>Total</b>	<b>38,013</b>	<b>20,614</b>	<b>18,122</b>	<b>6,225</b>	<b>7,711</b>	<b>1,098</b>	<b>3,736</b>	<b>95,519</b>
<b>Passenger-journeys</b>								
( <sup>'000</sup> )(c)—								
Suburban	196,097	133,840	30,184	12,918	10,800	597	..	384,436
Country(d)	12,403	3,954	1,762	515	350	189	207	19,380
<b>Total</b>	<b>208,500</b>	<b>137,794</b>	<b>31,946</b>	<b>13,433</b>	<b>11,150</b>	<b>785</b>	<b>207</b>	<b>403,816</b>
<b>Passenger-miles</b>								
( <sup>'000</sup> )(e)—								
Suburban	n.a.	1,206,390	n.a.	100,649	n.a.	4,134	..	n.a.
Country	n.a.	332,400	n.a.	81,452	72,023	10,198	128,878	n.a.
<b>Total</b>	<b>n.a.</b>	<b>1,538,789</b>	<b>n.a.</b>	<b>182,101</b>	<b>n.a.</b>	<b>14,332</b>	<b>128,878</b>	<b>n.a.</b>
<b>Freight—</b>								
Tons carried ( <sup>'000</sup> )(d)	31,800	11,609	18,963	5,919	13,648	1,278	4,054	87,271
Net ton-miles								
(million)(f)	5,268.6	1,996.2	3,862.0	968.1	2,108.5	103.8	1,227.9	15,535.1

(a) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one mile for revenue purposes. (b) Includes mixed train-mileage. (c) Based on ticket sales making allowances for periodical tickets. Tickets sold at concession rates are counted as full journeys. (d) Inter-system traffic is included in the total for each system (including each Commonwealth railway) over which it passes. (e) One passenger travelling one mile. (f) One ton carried one mile.

## Rolling stock

GOVERNMENT RAILWAYS: ROLLING STOCK INCLUDED IN CAPITAL ACCOUNT  
(Number)

System and date	Locomotives					Coaching stock(b)	Goods stock	Service stock
	Steam	Diesel-electric	Electric	Other(a)	Total			
30 June 1972—								
New South Wales . . .	60	400	41	66	567	(c)3,270	18,278	2,099
Victoria . . . . .	37	249	35	81	402	(c)2,420	19,471	1,602
Queensland . . . . .	..	357	..	81	438	1,213	19,834	2,126
South Australia . . .	4	151	..	..	155	(c)424	7,184	607
Western Australia . .	48	184	..	18	250	(c)448	11,878	871
Tasmania . . . . .	18	40	..	21	79	120	2,055	177
Commonwealth . . .	1	108	..	..	109	(c)86	2,410	530
<b>Australia . . . . .</b>	<b>168</b>	<b>1,489</b>	<b>76</b>	<b>267</b>	<b>2,000</b>	<b>(d)8,178</b>	<b>(d)81,135</b>	<b>(d)8,033</b>
30 June—								
1971 . . . . .	200	1,447	76	256	1,979	8,183	82,279	8,141
1970 . . . . .	368	1,388	76	230	2,062	8,281	83,840	8,205
1969 . . . . .	753	1,283	76	209	2,321	8,127	84,584	7,972
1968 . . . . .	1,077	1,186	76	168	2,507	8,619	85,552	7,904

(a) Includes non-passenger-carrying diesel power vans. (b) Includes all brake vans and non-powered electric train stock. (c) Excludes stock jointly-owned with other systems. (d) Includes jointly-owned stock.

## Train-mileage

## Train-mileage by type of service and motive power

GOVERNMENT RAILWAYS: TRAIN MILEAGE 1971-72  
(<sup>'000</sup> miles)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
Type of service—								
Passenger—suburban	10,256	8,287	2,024	2,064	1,368	105	..	24,104
Passenger—country .	10,313	4,761	2,932	1,205	995	224	942	21,372
Goods(a) . . . . .	17,444	7,566	13,166	2,957	5,348	769	2,793	50,043
<b>Total . . . . .</b>	<b>38,013</b>	<b>20,614</b>	<b>18,122</b>	<b>6,225</b>	<b>7,711</b>	<b>1,098</b>	<b>3,736</b>	<b>95,519</b>
Type of motive power—								
Hauled by diesel-electric locomotives	21,050	9,826	16,025	3,599	6,148	959	3,650	61,256
Hauled by steam locomotives . . . . .	372	13	3	3	11	..	..	402
Hauled by electric and other locomotives .	2,173	941	414	..	..	10	..	3,538
Powered coaching stock . . . . .	14,417	9,835	1,680	2,624	1,552	129	86	30,323
<b>Total . . . . .</b>	<b>38,013</b>	<b>20,614</b>	<b>18,122</b>	<b>6,225</b>	<b>7,711</b>	<b>1,098</b>	<b>3,736</b>	<b>95,519</b>

(a) Includes mixed train-miles.

## Total train-mileage

TRAIN MILEAGE, 1967-68 TO 1971-72  
(<sup>'000</sup> miles)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
1967-68 . . . . .	38,535	19,885	16,831	6,418	8,372	1,247	3,206	94,494
1968-69 . . . . .	38,201	19,689	17,109	6,176	7,901	1,197	3,559	93,832
1969-70 . . . . .	39,128	20,543	18,263	6,192	7,848	1,180	3,963	97,119
1970-71 . . . . .	39,540	20,831	17,368	6,344	7,944	1,096	4,010	97,133
1971-72 . . . . .	38,013	20,614	18,122	6,225	7,711	1,098	3,736	95,519



**Passenger traffic***Passenger-journeys***GOVERNMENT RAILWAYS: PASSENGER-JOURNEYS(a), SYSTEMS, 1967-68 TO 1971-72**  
(<sup>'000</sup>)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Cwlth</i>	<i>Aust.</i>
<b>SUBURBAN</b>								
1967-68	238,061	141,733	24,065	14,447	9,628	870	..	428,804
1968-69	233,211	140,788	25,771	13,760	9,832	838	..	424,200
1969-70	236,347	140,309	26,317	13,441	10,227	712	..	427,354
1970-71	238,800	138,131	27,621	13,393	10,557	636	..	429,139
1971-72	(b)196,097	133,840	30,184	12,918	10,800	597	..	384,436

<b>COUNTRY(c)</b>								
1967-68	15,253	4,535	2,526	795	342	217	347	24,015
1968-69	15,257	4,078	2,395	664	338	207	298	23,237
1969-70	15,231	4,000	2,197	549	352	194	244	22,768
1970-71	15,987	4,080	1,915	553	362	235	259	23,391
1971-72	(b)12,403	3,954	1,762	515	350	189	207	19,380

<b>TOTAL(c)</b>								
1967-68	253,313	146,268	26,591	15,242	9,970	1,087	347	452,818
1968-69	248,469	144,866	28,165	14,423	10,170	1,045	298	447,437
1969-70	251,578	144,309	28,515	13,990	10,580	907	244	450,122
1970-71	254,787	142,211	29,536	13,946	10,919	871	259	452,530
1971-72	(b)208,500	137,794	31,946	13,433	11,150	785	207	403,816

(a) Based on ticket sales making allowance for periodical tickets. Tickets sold at concession rates are counted as full journeys. (b) Figures for earlier years include unremunerative journeys. (c) Inter-system traffic is included in the total for each system (including each Commonwealth railway) over which it passes.

*Passenger-miles***GOVERNMENT RAILWAYS: PASSENGER-MILES(a), SYSTEMS, 1967-68 TO 1971-72**  
(<sup>'000</sup>)

<i>Year</i>	<i>Vic.</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Cwlth</i>
<b>SUBURBAN</b>					
1967-68	1,250,058	117,764	n.a.	5,665	..
1968-69	1,263,823	112,039	n.a.	5,567	..
1969-70	1,252,955	108,790	n.a.	4,941	..
1970-71	1,285,253	106,052	n.a.	4,523	..
1971-72	1,206,390	100,649	n.a.	4,134	..

<b>COUNTRY</b>					
1967-68	375,783	89,629	68,065	11,427	119,772
1968-69	368,139	84,633	67,627	11,322	125,612
1969-70	355,755	86,547	74,581	10,695	135,830
1970-71	379,845	91,680	77,170	12,270	141,410
1971-72	332,400	81,452	72,023	10,198	128,878

<b>TOTAL</b>					
1967-68	1,625,840	207,393	n.a.	17,092	119,772
1968-69	1,631,962	196,672	n.a.	16,889	125,612
1969-70	1,608,710	195,337	n.a.	15,636	135,830
1970-71	1,665,098	197,732	n.a.	16,793	141,410
1971-72	1,538,789	182,101	n.a.	14,332	128,878

(a) Particulars for New South Wales, Queensland and the suburban system in Western Australia are not available and as a consequence, no totals for Australia are available.

## Freight traffic

## Freight carried

GOVERNMENT RAILWAYS: FREIGHT CARRIED(a), SYSTEMS  
(<sup>'000 tons</sup>)

Commodity and year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
1971-72—								
Wheat . . . . .	3,277	2,048	527	781	2,538	..	..	9,171
Other agricultural produce . . . . .	1,057	1,050	2,848	551	916	24	31	6,477
Coal, coke and briquettes . . . . .	13,769	1,156	11,092	6	191	96	1,513	27,823
Other minerals(b) . . . . .	3,375	157	1,020	1,756	7,546	23	1,001	14,878
Wool . . . . .	189	165	23	22	144	4	2	549
Fertilisers and manure . . . . .	244	743	116	277	416	88	3	1,887
Cement . . . . .	1,040	842	203	56	(c)	280	135	2,556
Timber . . . . .	258	452	141	61	277	355	36	1,580
Livestock . . . . .	171	268	552	137	80	12	109	1,329
All other commodities . . . . .	8,419	4,728	2,439	2,272	(d)1,540	398	1,223	21,019
<b>Total . . . . .</b>	<b>31,800</b>	<b>11,609</b>	<b>18,963</b>	<b>5,919</b>	<b>13,648</b>	<b>1,278</b>	<b>4,054</b>	<b>87,271</b>
1970-71 . . . . .	33,204	12,490	15,418	5,990	13,244	1,201	4,382	85,929
1969-70 . . . . .	33,442	11,835	14,439	5,888	10,665	1,258	4,824	82,351
1968-69 . . . . .	31,871	11,316	12,975	5,003	8,934	1,242	4,401	75,742
1967-68 . . . . .	30,745	11,116	11,133	4,368	8,910	1,162	3,627	71,061

(a) Inter-system traffic is included in the total for each system (including each Commonwealth railway) over which it passes. (b) Includes sand and gravel. (c) Cement included with 'All other commodities'. (d) Includes cement.

## Freight net ton-miles

GOVERNMENT RAILWAYS: FREIGHT NET TON-MILES, SYSTEMS  
(Million)

Commodity and year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
1971-72—								
Wheat . . . . .	1,020.1	392.6	(a)	73.6	417.8	..	..	n.a.
Other agricultural produce . . . . .	397.9	199.4	(a)	59.5	157.8	2.6	23.1	n.a.
Coal, coke and briquettes . . . . .	575.7	119.5	(a)	1.7	10.1	11.9	235.9	n.a.
Other minerals(b) . . . . .	420.6	16.3	(a)	252.0	866.0	1.3	129.4	n.a.
Wool . . . . .	47.1	23.6	(a)	4.1	36.8	0.5	1.5	n.a.
Fertilisers and manure . . . . .	80.3	119.9	(a)	52.7	80.2	16.0	2.1	n.a.
Cement . . . . .	153.0	58.4	(a)	11.2	(c)	15.2	11.8	n.a.
Timber . . . . .	109.5	74.5	(a)	12.5	56.0	18.6	31.9	n.a.
Livestock . . . . .	57.1	49.9	159.6	20.2	13.6	1.8	37.7	339.9
All other commodities . . . . .	2,407.3	942.2	3,702.4	480.5	(d)470.2	35.9	754.5	8,793.0
<b>Total . . . . .</b>	<b>5,268.6</b>	<b>1,996.2</b>	<b>3,862.0</b>	<b>968.1</b>	<b>2,108.5</b>	<b>103.8</b>	<b>1,227.9</b>	<b>15,535.1</b>
1970-71 . . . . .	5,538.1	2,118.7	3,316.4	986.9	2,078.0	94.2	1,282.1	15,414.5
1969-70 . . . . .	5,384.3	2,037.2	3,110.2	947.6	1,749.1	119.5	1,312.5	14,660.5
1968-69 . . . . .	4,942.4	1,903.0	2,617.5	803.7	1,525.8	117.2	1,216.3	13,125.9
1967-68 . . . . .	4,844.1	1,776.2	2,201.3	680.9	1,571.7	117.2	1,072.3	12,263.7

(a) Not available separately, included with 'All other commodities'. (b) Includes sand and gravel. (c) Cement included with 'All other commodities'. (d) Includes cement.

## Finance

**GOVERNMENT RAILWAYS: GROSS EARNINGS(a), SYSTEMS, 1971-72**  
(\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Cwlth</i>	<i>Aust.</i>
Coaching—								
Suburban passenger .	45,722	26,773	3,472	2,152	1,590	69	..	79,777
Country passenger .	20,138	7,968	3,938	1,944	1,944	142	3,468	39,541
Other . . . . .	9,561	5,669	2,863	1,050	1,463	217	622	21,447
<i>Total, coaching .</i>	<i>75,421</i>	<i>40,410</i>	<i>10,273</i>	<i>5,146</i>	<i>4,997</i>	<i>428</i>	<i>4,090</i>	<i>140,765</i>
Freight (goods and live-stock)—								
Wheat . . . . .	(c)	12,714	4,323	3,365	12,170	..	..	n.a.
Other agricultural produce . . . . .	(c)	6,018	15,325	2,350	4,781	127	326	n.a.
Coal, coke and briquettes . . . . .	(c)	4,276	33,833	33	582	377	1,740	n.a.
Other minerals(d) . . . . .	(c)	432	10,543	7,504	13,980	71	2,221	n.a.
Wool . . . . .	(c)	1,429	769	134	2,129	30	33	n.a.
Fertilisers and manure . . . . .	(c)	3,394	1,462	939	2,110	751	17	n.a.
Cement . . . . .	(c)	2,897	2,188	295	(e)	862	282	n.a.
Timber . . . . .	(c)	2,922	1,749	293	2,033	906	330	n.a.
Livestock . . . . .	(c)	1,566	7,404	951	505	81	611	n.a.
All other commodities . . . . .	(c)	28,904	33,466	11,233	(f)16,876	2,235	17,487	n.a.
<i>Total, freight .</i>	<i>(b)174,886</i>	<i>64,552</i>	<i>111,063</i>	<i>27,098</i>	<i>55,166</i>	<i>5,441</i>	<i>23,045</i>	<i>461,251</i>
Miscellaneous . . . . .	(b)15,962	7,724	3,446	3,142	3,471	254	2,073	36,072
<i>Grand total .</i>	<i>(b)266,268</i>	<i>112,685</i>	<i>124,782</i>	<i>35,386</i>	<i>63,634</i>	<i>6,123</i>	<i>29,208</i>	<i>638,086</i>

(a) Excludes Government grants. (b) Includes State Co-ordination Tax Contribution. (c) Not available separately.  
(d) Includes sand and gravel. (e) Cement included with 'All other commodities'. (f) Includes cement.

**GOVERNMENT RAILWAYS: WORKING EXPENSES, SYSTEMS, 1971-72**  
(\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.(a)</i>	<i>Cwlth</i>	<i>Aust.</i>
Maintenance of way and works . . . . .	42,577	27,909	35,328	(a)11,707	(a)15,419	2,315	7,897	143,152
Motive power(b) . . . . .	84,639	35,429	43,760	(a)15,540	(a)23,903	3,507	8,825	215,603
Traffic . . . . .	68,609	42,286	32,610	(a)13,490	15,824	2,992	6,159	181,970
Other charges . . . . .	67,658	33,097	8,046	5,784	8,603	1,577	8,659	133,424
<i>Total . . . . .</i>	<i>263,484</i>	<i>138,722</i>	<i>119,743</i>	<i>(a)46,521</i>	<i>(a)63,748</i>	<i>10,391</i>	<i>(a)31,540</i>	<i>674,149</i>

(a) Includes provision of reserves for depreciation. (b) Includes maintenance of rolling stock.



**GOVERNMENT RAILWAYS: GROSS EARNINGS, WORKING EXPENSES, AND NET EARNINGS  
SYSTEMS, 1967-68 TO 1971-72**  
(\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Cwlth</i>	<i>Aust.</i>
<b>GROSS EARNINGS</b>								
1967-68	224,966	99,301	94,018	28,046	51,628	6,587	22,233	526,779
1968-69	228,560	100,502	102,452	30,300	49,364	6,947	25,371	543,496
1969-70	247,288	105,045	108,831	33,340	56,044	6,920	27,649	585,116
1970-71	251,899	108,646	110,165	34,399	60,671	5,805	28,979	600,564
1971-72	266,268	112,685	124,782	35,386	63,634	6,123	29,208	638,086
<b>WORKING EXPENSES</b>								
				(a)	(a)	(a)	(a)	
1967-68	194,939	105,084	87,435	34,610	47,745	8,751	21,308	499,872
1968-69	205,164	111,216	91,427	36,154	49,947	9,089	24,614	527,611
1969-70	217,660	118,558	96,530	39,040	54,992	9,031	27,156	562,967
1970-71	242,842	129,054	105,155	42,714	59,652	9,891	29,382	618,690
1971-72	263,484	138,722	119,743	46,521	63,748	10,391	31,540	674,149
<b>NET EARNINGS(b)</b>								
1967-68	30,027	-5,784	6,583	-6,564	3,883	-2,164	925	26,906
1968-69	23,396	-10,714	11,025	-5,854	-583	-2,142	757	15,885
1969-70	29,628	-13,513	12,301	-5,699	1,051	-2,111	493	22,150
1970-71	9,057	-20,408	5,010	-8,315	1,019	-4,086	-403	-18,126
1971-72	2,784	-26,036	5,038	-11,135	-115	-4,267	-2,333	-36,063

(a) Includes provision of reserves for depreciation.  
in this table.

(b) Excess of gross earnings over working expenses as shown

**GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT, SYSTEMS, 30 JUNE 1972**  
(\$'000)

System	Net earnings—excess of gross earnings over working expenses	Plus grants and other earnings payable to railways			Less other expenses charged to railways					Surplus (+) or deficit (—)	
		State Government grants	Road motor earnings	Other	Total	Interest and exchange	Sinking fund	Road motor expenses (a)	Other		Total
New South Wales	2,784	(b)3,700	..	..	3,700	30,647	7,163	..	(c)1,282	39,092	—32,608
Victoria	—26,036	(d)34	71	..	106	9,159	393	178	..	9,730	—35,661
Queensland	5,038	..	..	..	..	29,651	(e)99	..	(f)2,000	31,750	(g)—26,711
South Australia	—11,135	(h)19,500	217	..	19,717	7,308	..	284	(i)967	8,560	23
Western Australia	—115	..	1,213	..	1,213	11,826	..	1,420	..	13,246	—12,148
Tasmania	—4,267	..	..	(j)6	6	1,520	..	..	..	1,520	—5,781
Commonwealth	—2,333	..	..	..	..	..	..	..	..	..	—2,333
Australia	—36,063	23,234	1,501	6	24,742	90,111	7,655	1,882	4,250	103,898	—115,219

(a) Includes interest and exchange. (b) Grants to meet losses on country developmental lines, and to subsidise payments due to superannuation account. (c) Loan management and loan flotation expenses. (d) Kerang-Koondrook tramway recoup from Treasury. (e) Queensland 4ft 8½in gauge system only. (f) Demolished assets written off. (g) Includes deficit (\$1,334,699) on the Queensland 4ft 8½in gauge system. (h) Grants towards deficiency. (i) Interest and repayment under Railway Standardisation and Railway Equipment Agreements. (j) Miscellaneous goods revenue from rail-ferry service traffic not carried by rail and Commonwealth Government contribution towards cost of flood damage.

**Employment, salaries and wages****GOVERNMENT RAILWAYS: AVERAGE NUMBER OF EMPLOYEES (EXCLUDING CONSTRUCTION STAFF) AND SALARIES AND WAGES PAID(a), 1971-72**

	<i>N.S.W.</i>	<i>Vic.(b)</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Cwlth</i>	<i>Aust.</i>
Salaried staff . . .	9,580	5,383	4,150	1,815	2,160	404	692	24,184
Wages staff . . .	33,831	20,587	18,547	6,069	7,832	1,582	3,236	91,684
<b>Total staff . . .</b>	<b>43,411</b>	<b>25,970</b>	<b>22,697</b>	<b>7,884</b>	<b>9,992</b>	<b>1,986</b>	<b>3,928</b>	<b>115,868</b>
SALARIES AND WAGES PAID								
paid . . . \$'000	195,983	107,797	95,708	36,878	41,906	7,914	17,128	503,315

(a) Excludes salaries and wages paid to road motor staff. (b) Includes construction staff.

**Private railways**

Private railways are operated over a range of gauges and are to be found in each State of the Commonwealth. These systems service agricultural areas, mining ventures, industrial complexes and ports. A range of commodities are carried, including coal, iron ore, other minerals and manufactured products. In recent years there has been considerable growth in the total route mileage of private railways, from an estimated 300 route miles in 1965, to approximately 1,082 by December 1972. The construction of 686 miles of heavy duty railway for north-west Western Australia iron ore projects accounts for much of the increase.

In addition to the above, there are approximately 2,000 route miles of permanent privately owned sugar cane railways or 'tramways' along the north-east coast of Australia. The bulk of this is 2 ft 0 in gauge. Additional temporary lines are laid during the cane harvesting season. These lines connect 30 sugar mills to the Queensland Government Railway system. Other private railways exist within factory and industrial areas for the internal transport of goods and materials but at present no statistics are available as to the extent of the mileage involved and traffic task performed.

The carriage of passengers by private railways is now negligible; however, tonnages of freight carried are increasing as indicated in the following table.

**PRIVATE RAILWAYS: ESTIMATED DOMESTIC FREIGHT TRAFFIC TASK(a)**  
**1965-66 TO 1970-71**

(Source: Department of Transport)

<i>Year</i>	<i>Tons carried</i>	<i>Private as a percentage of total tons carried(b)</i>	<i>Ton-miles</i>	<i>Private as a percentage of total ton-miles performed(b)</i>
	'000	per cent	million	per cent
1965-66 . . .	30,752	32.3	427	3.7
1966-67 . . .	35,895	34.4	1,141	9.0
1967-68 . . .	43,273	37.8	2,008	14.1
1968-69 . . .	52,545	41.0	3,347	20.3
1969-70 . . .	65,591	44.3	5,715	28.0
1970-71 . . .	78,728	47.8	8,426	35.3

(a) Includes tons and ton-miles performed by sugar tramways, but excludes internal industrial plant railways. (b) Total equals government plus private.

During the period 1965-66 to 1970-71 tonnages of freight carried increased by 156 per cent. During the same period freight ton-miles performed increased almost twenty-fold. The extent of this growth has been such as to increase the private railway system's share of the total freight traffic task performed by all railways in Australia.

Mineral ores and concentrates are the predominant items of freight and, in contrast to the Government railways, carriage of general merchandise is of minor importance. The rapid growth of tons carried and ton-miles performed since 1964-65 reflects the growing traffic task performed by the Western Australian iron ore railways. In 1970-71 these railways alone carried 53 per cent of the total tonnage carried by all private railways, and accounted for 94 per cent of the ton-miles performed.

Details of location, ownership and operation of the major private railway systems is given in Year Book No. 56, 1970, page 364.

## TRAMWAY, TROLLEY-BUS, BUS, AND FERRY SERVICES

## Systems in operation

*Tramway and trolley-bus.* At 30 June 1972 tramway services were in operation in Melbourne, Victoria, and in Adelaide, South Australia. The last of the trolley-bus services ceased to operate in Australia with their replacement by buses in Perth, Western Australia on 29 August 1969. Tramway services ceased to operate in Ballarat on 19 September 1971 and in Bendigo on 16 April 1972.

In many parts of Australia private lines used for special purposes in connection with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways, and the traffic on them has nothing in common with that of the street tramways used for the conveyance of passengers, which are dealt with in this section. For further details, see page 354.

*Motor bus.* Services are operated by government or municipal authorities and private operators. Statistics are collected for government and municipal bus services located in all State capital cities; Canberra, Australian Capital Territory; Newcastle, New South Wales; Rockhampton, Queensland; Fremantle and the Eastern Goldfields area, Western Australia; Launceston and Burnie, Tasmania; Darwin, Northern Territory; and for country road services operated by the Western Australian Government Railways. Particulars of motor bus services under the control of private operators for the States of Victoria, Queensland, South Australia, and Western Australia are given in the annual bulletin *Transport and Communication* up to 1970-71.

*Ferry.* Ferry passenger services are operated in the following States: New South Wales, at Sydney and Newcastle; Western Australia, on the Swan River at Perth; Tasmania, on the Mersey River at Devonport. Control is exercised by both government authorities and private operators. Particulars of the operations of these services are given in previous issues of this Year Book and in the annual bulletin *Transport and Communication*. In Victoria and Queensland the services operated are not extensive. There are no ferry passenger services in South Australia.

## Government and municipal tramway, trolley-bus and bus services

Because of the development in recent years of the various forms of public road transport under the control of single authorities, and the gradual replacement of tramway and trolley-bus services by motor bus services, it is not possible to obtain separate statistics for all phases of the activities of each form of transport, particularly financial operations.

TRAMWAY, AND BUS SERVICES: GOVERNMENT AND MUNICIPAL STATES AND TERRITORIES, 1971-72

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-miles at 30 June—									
Tram(a) . . . . . miles		133		7					140
Bus . . . . . „	618	146	291	164	4,879	239	84	100	6,521
Vehicle-miles—									
Tram . . . . . '000		15,047		418					15,466
Bus . . . . . „	40,853	6,953	13,125	10,354	24,934	5,373	770	3,749	106,111
Rolling stock at 30 June—									
Tram . . . . . number		696		26					722
Bus . . . . . „	1,864	272	607	396	823	283	29	163	4,437
Passenger-journeys—									
Tram . . . . . '000		102,973		1,585					104,558
Bus . . . . . „	189,220	20,470	60,493	39,257	60,199	19,606	1,125	8,049	398,421
Gross revenue(b)—									
Tram and bus . . . . \$'000	36,650	23,189	10,101	6,978	9,780	2,639	295	1,383	91,015
Working expenses(c)—									
Tram and bus . . . . \$'000	43,586	24,127	9,421	7,282	12,625	3,806	459	1,968	103,274
Net revenue—									
Tram and bus . . . . \$'000	—6,936	—939	681	—304	—2,845	—1,168	—164	—585	—12,260
Employees at 30 June—									
Tram and bus . . . . number	7,470	4,331	1,684	1,145	2,022	608	36	249	17,545
Accidents—									
Tram and bus(d)—									
Persons killed . . . . number	9	5	4	3		1	1	41	22
Persons injured . . . . „	1,176	423	93	147	358	36			2,275

(a) Gauge 4 ft 8½ in throughout. (b) Excludes government grants. (c) Includes provision of reserves for depreciation, etc., where possible. (d) Excludes accidents to employees.

Minus sign (—) denotes deficit.



**TRAMWAY, TROLLEY-BUS AND BUS SERVICES: GOVERNMENT AND MUNICIPAL  
AUSTRALIA, 1967-68 TO 1971-72**

	1967-68	1968-69	1969-70	1970-71	1971-72
Route-miles at 30 June—					
Tram . . . . . miles	222	163	163	163	140
Trolley-bus . . . . . "	64	9	..	..	..
Bus . . . . . "	6,794	6,362	7,198	6,592	6,521
Vehicle miles—					
Tram . . . . . '000	22,813	20,038	16,492	16,035	15,646
Trolley-bus . . . . . "	2,038	1,018	66	..	..
Bus . . . . . "	99,357	102,049	108,940	110,013	106,111
Rolling stock at 30 June—					
Tram . . . . . number	1,004	771	780	784	722
Trolley-bus . . . . . "	138	50	..	..	..
Bus . . . . . "	3,571	4,210	4,345	4,469	4,437
Passenger-journeys—					
Tram . . . . . '000	179,280	149,055	115,297	112,974	104,558
Trolley-bus and bus . . . . . "	429,819	441,036	459,859	447,646	398,421
Gross revenue(a)—					
Tram, trolley-bus and bus . \$'000	72,847	79,288	80,542	82,510	91,015
Working expenses(b)—					
Tram, trolley-bus and bus . \$'000	79,199	84,649	85,929	96,507	103,274
Net revenue—					
Tram, trolley-bus and bus . \$'000	-6,350	-5,361	-5,387	-13,997	-12,260
Employees at 30 June—					
Tram, trolley-bus and bus number	18,735	17,840	17,781	17,776	17,545
Accidents—					
Tram, trolley-bus and bus(c)—					
Persons killed . . . number	39	27	33	21	22
Persons injured . . . . . "	2,246	2,328	2,416	2,459	2,275

(a) Excludes government grants.  
(c) Excludes accidents to employees.

(b) Includes provision of reserves for depreciation, etc., where possible.

Minus sign (—) denotes deficit.

## MOTOR VEHICLES

The arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia, since they are the function of a separate authority, or authorities, in each State and Territory. Particulars of registration, licences, fees payable, etc., in each State and Territory at 30 June 1971 are shown in *Transport and Communication*, Bulletin No. 62, 1970-71.

Tables in this section include vehicles owned by private individuals, local government authorities, State Governments, and the Commonwealth Government (excluding those belonging to the defence services).

### Survey of Motor Vehicle Usage

A survey was conducted throughout Australia in late 1971 by the Bureau of Census and Statistics for the purpose of gathering information on the usage of motor vehicles. This survey was similar to one carried out in 1963. The owners of approximately 51,000 vehicles other than buses were approached for information relating to the usage of their vehicles over the twelve months ended 30 September 1971. In addition usage details of 800 bus fleets were sampled and collected for the twelve months ended 30 June 1971. The framework, from which the sample was drawn, was obtained from the motor vehicle registration authorities in all States and Territories. The survey was based on respondents' recollections of their usage of the selected vehicles/fleets over their period of ownership during the survey year.

The main purpose of the survey was to determine the total mileage travelled by vehicles, classified according to area and purpose of travel. Information was also obtained from the survey on: (i) ton-miles, (ii) average load carried, (iii) vehicle usage (i.e. for hire and reward, ancillary or other), (iv) fuel consumption, (v) road surface, (vi) occupant-miles, (vii) driver characteristics.

The following table shows, for Australia, total annual mileage for the twelve months ended 30 September 1971 according to area and purpose of travel. The percentage standard errors (S.E. %) indicate the extent to which the estimates can vary by chance because only a sample and not the total vehicle population was enumerated. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors. For example, if an estimate of 3,000 million miles has a standard error of 5 per cent (i.e. 150 million miles), then there would be approximately two chances in three that a comparable complete collection would give a figure within the range of 2,850 million miles to 3,150 million miles, and about nineteen chances in twenty that the figure would be within the range of 2,700 million miles to 3,300 million miles.

**TOTAL ANNUAL MILEAGE(a) BY PURPOSE AND AREA OF OPERATION  
AUSTRALIA, TWELVE MONTHS ENDED 30 SEPTEMBER 1971**

Area of operation	Laden business		Unladen business		Total business(b)		Paid to and from work(c)		Unpaid to and from work		Private		Total	
	million miles	S.E. %	million miles	S.E. %	million miles	S.E. %	million miles	S.E. %	million miles	S.E. %	million miles	S.E. %	million miles	S.E. %
Capital city and environs	2,227.1	1.7	1,124.5	2.1	7,789.9	2.5	1,498.8	5.5	5,985.9	2.8	11,279.9	1.9	26,644.8	1.3
Provincial urban(d)	319.7	4.5	198.5	6.3	1,081.9	8.7	156.8	14.6	821.2	7.8	2,022.2	4.3	4,082.1	4.0
Other areas of State or Territory	2,173.5	1.6	1,628.5	1.8	6,588.3	2.3	429.1	12.3	1,783.0	4.9	8,810.7	2.1	17,611.3	1.6
Other States and Territories(e)	248.1	3.6	79.6	5.1	549.1	7.3	30.4	25.7	133.9	15.0	1,310.7	5.0	2,024.2	4.1
Total	4,968.4	1.0	3,031.0	1.3	16,099.3	1.7	2,115.2	5.0	8,724.1	2.3	23,423.9	1.2	50,362.9	0.8

(a) Excludes mileage by buses. (b) Includes the total mileage of cars, station wagons and motor cycles for business purposes. The dissection of business miles into laden/unladen for these vehicles was not sought. (c) For the purpose of this survey 'Paid to and from work' mileage is not considered to be business mileage. (d) Includes centres (other than capital cities) having populations greater than 40,000 at the 1966 Census of Population and Housing. (e) Covers mileage by vehicles in all States other than that in which the vehicle was registered.

### Motor vehicles on register

Details of motor vehicles on the register are compiled by up-dating motor vehicle census data from information made available by the various motor vehicle registration authorities in the States and Territories. Censuses of motor vehicles have been conducted in respect of 31 December 1955, 31 December 1962 and 30 September 1971. At these census dates considerably greater information concerning the particulars shown in the tables following is available. Final detailed results of the 1971 census have been published in separate census bulletins for each State and Territory and for Australia.

A revised classification of motor vehicles has been adopted for publication of statistics of motor vehicle registrations from 1 January 1972. The principal differences between this classification and that which it replaces involve the categories light commercial type vehicles, trucks and other truck type vehicles. Consequently, figures shown from January 1972 for these categories are not strictly comparable with data for previous periods.

**MOTOR VEHICLES ON REGISTER, BY TYPE OF VEHICLE, 31 DECEMBER 1972  
(<sup>'000</sup>)**

State or Territory	Motor cars	Station wagons	Light commercial type vehicles		Trucks (carrying capacity 20 cwt and over)		Other truck type vehicles	Buses	Motor cycles	Total
			open	closed	rigid	articulated				
New South Wales	1,247.5	251.0	128.4	53.7	136.1	12.7	3.8	8.4	74.7	1,916.3
Victoria	987.1	207.3	91.0	49.7	82.1	9.7	3.9	5.6	36.7	1,473.1
Queensland	463.1	125.0	83.5	23.2	68.8	4.8	0.8	3.4	37.1	809.6
South Australia	356.2	64.2	34.2	10.3	40.4	3.1	1.9	2.9	22.7	536.0
Western Australia	288.8	66.3	42.5	16.4	41.7	2.4	1.6	2.7	16.2	478.7
Tasmania	113.3	20.3	14.0	4.9	12.6	0.9	0.1	1.4	4.1	171.6
Northern Territory	13.6	5.7	4.5	1.1	5.4	0.3	0.1	0.2	2.6	33.6
Australian Capital Territory	53.8	10.6	3.3	2.0	3.0	0.1	0.1	0.5	3.5	77.0
Total	3,523.4	750.4	401.4	161.3	390.1	34.0	12.3	25.1	197.6	5,495.9

**MOTOR VEHICLES ON REGISTER, BY TYPE OF VEHICLE**  
**AUSTRALIA, 1968 TO 1972**  
('000)

31 December—	Motor cars and station wagons	Light commercial type vehicles, truck type vehicles and buses	Motor cycles	Total vehicles
1968 . . . . .	3,396.2	904.8	90.4	4,391.4
1969 . . . . .	3,619.9	929.9	106.1	4,655.9
1970 . . . . .	3,834.0	949.0	127.7	4,910.7
1971 . . . . .	4,057.5	982.4	164.8	5,204.9
1972 . . . . .	4,274.0	1,024.1	197.6	5,495.9

**MOTOR VEHICLES(a) ON REGISTER PER 1,000 OF POPULATION**  
**STATES AND TERRITORIES, 1968 TO 1972**

31 December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968 . . . . .	345.0	362.5	363.7	392.1	390.4	377.7	300.6	386.8	361.6
1969 . . . . .	359.0	374.1	377.5	407.3	406.7	391.2	319.3	395.9	375.3
1970 . . . . .	371.3	387.5	390.7	418.8	417.3	404.8	321.3	415.0	387.8
1971 . . . . .	390.7	398.6	406.0	430.5	432.4	420.1	344.9	435.2	403.2
1972 . . . . .	408.1	411.7	426.5	448.0	449.2	433.8	349.3	465.8	419.8

(a) Excludes tractors, plant and equipment.

**Registrations of new motor vehicles**

Particulars of registrations of new motor vehicles are shown by type, make, and horsepower of vehicle in monthly, quarterly and annual bulletins of Motor Vehicle Registrations.

In these statistics 'registrations' means registrations processed by the motor vehicle registration authorities in the States and Territories during the period.

A revised classification of motor vehicles has been adopted for publication of statistics of new motor vehicle registrations from 1 January 1972. The principal differences between this classification and that which it replaces involve the categories light commercial type vehicles, trucks and other truck type vehicles. Consequently, figures shown from January 1972 for these categories are not strictly comparable with data for previous periods.

**REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE**

State or Territory and year	Motor cars	Station wagons	Light commercial type vehicles		Trucks (carrying capacity 20 cwt and over)		Other truck type vehicles	Buses	Total (excludes motor cycles)	Motor cycles
			Open	Closed	Rigid	Articu- lated				
1972—										
New South Wales . .	135,007	18,511	12,808	10,193	9,186	829	65	766	187,365	20,006
Victoria . . . . .	92,802	13,400	7,630	5,523	5,750	894	125	399	126,523	11,120
Queensland . . . . .	45,787	8,094	8,373	2,853	5,510	436	33	162	71,248	9,300
South Australia . . .	32,779	4,193	3,141	1,258	2,034	342	69	326	44,142	6,523
Western Australia . .	29,380	5,279	4,427	2,572	2,560	184	21	228	44,651	4,661
Tasmania . . . . .	11,051	1,204	1,054	487	727	147	17	83	14,770	1,089
Northern Territory . .	1,318	460	650	143	686	56	9	34	3,356	1,116
Australian Capital Territory . . . . .	5,800	787	462	463	416	25	1	49	8,003	826
Australia . . . . .	353,924	51,928	38,545	23,492	26,869	2,913	340	2,047	500,958	54,641
			(a)	(a)	(a)	(a)	(a)	(a)		
1971 . . . . .	362,669	54,555	33,822	22,908	26,900	2,900	1,263	2,394	504,511	48,786
1970 . . . . .	358,181	54,880	35,881	19,701	29,476	2,889	1,289	2,190	501,598	32,701
1969 . . . . .	343,275	57,604	36,510	17,621	29,700	2,700	1,407	2,041	488,158	25,386
1968 . . . . .	310,267	58,569	34,734	16,711	26,705	2,705	970	1,745	449,701	22,887

(a) Not directly comparable with figures subsequent to 1971.



**Drivers' and riders' licences**

At 30 June 1972 the numbers of licences in force to drive or ride motor vehicles were: New South Wales, 2,222,510; Victoria, 1,634,118; South Australia, 561,862; Western Australia, 493,431; Tasmania, 173,670; Northern Territory, 47,703; Australian Capital Territory, 109,165. Particulars are not available for Queensland.

**ROAD TRAFFIC ACCIDENTS****Compulsory fitting and use of seat belts and protective helmets in Australia**

Through the endorsement of the Australian Transport Advisory Council of Australian Design Rules for Motor Vehicle Safety, the fitting of belts in passenger cars and derivatives in each State was made mandatory for new motor vehicles for front seats from 1 January 1970 and for all positions from 1 January 1971.

The year 1973 saw the completion of laws requiring the compulsory wearing of seat belts, where fitted, in all motor vehicles, and the mandatory use of protective helmets by motor cycle riders and pillion passengers. The dates on which the laws came into effect were as follows:

	<i>Seat belts</i>	<i>Protective helmets</i>
New South Wales . . . .	1 October 1971	1 August 1971
Victoria . . . . .	22 December 1970	1 January 1961
Queensland . . . . .	1 January 1972	24 October 1970
South Australia . . . .	29 November 1971	31 December 1967
Western Australia . . .	24 December 1971	1 May 1971
Tasmania . . . . .	13 October 1971	19 December 1966
Northern Territory . . .	1 January 1972	8 November 1972
Australian Capital Territory .	1 January 1972	18 March 1973

The laws in force differ between States and Territories on matters such as exemptions and penalties. The exemptions for seat belts relate primarily to delivery men, persons reversing motor vehicles, the elderly, children under the age of 8 years, women in advanced stages of pregnancies, and persons exempted by a doctor's certificate. Exemptions for motor cyclists vary greatly and include persons exempted for religious reasons in New South Wales, passengers carried in side cars in Victoria and South Australia, and motor cyclists travelling at less than 15 miles per hour in South Australia.

Different types of belts fitted to vehicles include lap, diagonal, sash, lap and sash, harness and child restraints. Recent developments in seat belt design are aimed to improve their comfort to the wearer, their ease of adjustment and their effectiveness.

**Accidents involving casualties, persons killed, persons injured**

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF  
ACCIDENTS, PERSONS KILLED OR INJURED  
STATES AND TERRITORIES, 1971**

<i>State or Territory</i>	<i>Number of accidents</i>	<i>Persons killed</i>	<i>Persons injured</i>	<i>Per 100,000 of mean population</i>			<i>Per 10,000 motor vehicles registered(b)</i>		
				<i>Number of accidents</i>	<i>Persons killed</i>	<i>Persons injured</i>	<i>Number of accidents</i>	<i>Persons killed</i>	<i>Persons injured</i>
New South Wales	26,575	1,249	36,660	578	27	797	146	7	202
Victoria . . . . .	15,023	923	21,371	429	26	610	108	7	154
Queensland . . . .	8,147	594	11,387	446	33	623	111	8	155
South Australia . .	7,386	292	10,132	628	25	862	150	6	206
Western Australia	5,178	332	7,328	503	32	712	113	7	160
Tasmania . . . . .	1,385	130	2,056	354	33	526	84	8	125
Northern Territory	660	50	926	772	58	1,083	227	17	318
Australian Capital Territory . . . . .	856	20	1,176	594	14	817	131	3	179
<b>Australia . . . . .</b>	<b>65,210</b>	<b>3,590</b>	<b>91,036</b>	<b>511</b>	<b>28</b>	<b>714</b>	<b>127</b>	<b>7</b>	<b>177</b>

(a) Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. (b) Average number of motor vehicles (excluding tractors, plant and equipment) on register.

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF  
ACCIDENTS, PERSONS KILLED OR INJURED  
STATES AND TERRITORIES, 1967 TO 1971**

Year	N.S.W.	Vic.	Qld	S.A. (b)	W.A.	Tas.	N.T.	A.C.T.	Total		
									Num- ber	Per 100,000 of mean popu- lation	Per 10,000 motor vehicles regis- tered(c)
Accidents involving casualties—											
1967 . . . . .	21,610	14,331	7,015	7,242	4,659	1,342	359	695	57,253	484	139
1968 . . . . .	22,774	15,377	7,118	6,421	4,708	1,240	357	764	58,759	488	135
1969 . . . . .	24,164	16,527	7,494	6,895	4,809	1,416	500	792	62,597	509	136
1970 . . . . .	25,434	16,435	7,869	7,424	5,218	1,425	528	877	65,210	521	134
1971 . . . . .	26,575	15,023	8,147	7,386	5,178	1,385	660	856	65,210	511	127
Persons killed—											
1967 . . . . .	1,117	887	502	253	256	101	27	23	3,166	27	8
1968 . . . . .	1,211	949	477	275	320	118	18	14	3,382	28	8
1969 . . . . .	1,188	1,011	556	251	311	114	45	26	3,502	29	8
1970 . . . . .	1,309	1,061	537	349	351	118	42	31	3,798	30	8
1971 . . . . .	1,249	923	594	292	332	130	50	20	3,590	28	7
Persons injured—											
1967 . . . . .	29,501	20,636	9,850	9,955	6,426	2,095	541	1,017	80,021	677	194
1968 . . . . .	30,919	22,095	10,151	8,902	6,553	1,928	512	1,150	82,210	683	189
1969 . . . . .	32,752	23,797	10,406	9,961	6,788	2,264	727	1,169	87,864	714	191
1970 . . . . .	34,886	23,737	10,940	10,484	7,373	2,171	714	1,249	91,554	732	188
1971 . . . . .	36,660	21,371	11,387	10,132	7,328	2,056	926	1,176	91,036	714	177

(a) See footnote (a) to previous table. (b) Prior to 1 October 1967 includes accidents in which the injured persons did not require surgical or medical treatment and the number of persons injured in accidents who did not require surgical or medical treatment. (c) See footnote (b) to previous table.

**Types of road user killed or injured**

Responsibility for cause of accident is not indicated by this classification.

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): PERSONS KILLED OR INJURED  
TYPES OF ROAD USER INVOLVED, STATES AND TERRITORIES, 1971**

Type of road user	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
<b>PERSONS KILLED</b>									
Drivers of motor vehicles	465	334	255	109	136	51	22	8	1,380
Motor cyclists . . .	106	45	44	14	5	12	6	3	235
Pedal cyclists . . .	16	28	24	9	2	5	..	1	85
Passengers (all types)(b)	411	286	192	103	118	36	15	6	1,167
Pedestrians . . . .	250	229	78	57	64	26	7	2	713
Other classes(c) . . .	1	1	1	..	7	..	..	..	10
<b>Total</b> . . . . .	<b>1,249</b>	<b>923</b>	<b>594</b>	<b>292</b>	<b>332</b>	<b>130</b>	<b>50</b>	<b>20</b>	<b>3,590</b>
<b>PERSONS INJURED</b>									
Drivers of motor vehicles	14,671	8,325	4,533	3,991	3,228	815	379	461	36,403
Motor cyclists . . .	3,783	1,195	1,034	930	439	142	135	167	7,825
Pedal cyclists . . .	804	792	430	546	242	46	8	37	2,905
Passengers (all types)(b)	13,073	8,500	4,483	3,860	2,736	848	359	403	34,262
Pedestrians . . . .	4,292	2,525	897	799	661	205	45	99	9,523
Other classes(c) . . .	37	34	10	6	22	..	..	9	118
<b>Total</b> . . . . .	<b>36,660</b>	<b>21,371</b>	<b>11,387</b>	<b>10,132</b>	<b>7,328</b>	<b>2,056</b>	<b>926</b>	<b>1,176</b>	<b>91,036</b>

(a) Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. (b) Includes pillion riders. (c) Includes bystanders, tram drivers, riders of horses and drivers of animal-drawn vehicles.

## Age groups of persons killed or injured

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES<sup>(a)</sup>: PERSONS KILLED OR INJURED  
BY AGE GROUP: STATES AND TERRITORIES, 1971

Age group (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
PERSONS KILLED									
Under 5 . . .	35	34	14	10	10	4	3	3	113
5 and under 7 . . .	19	23	7	3	6	3	1	..	62
7 " " 17 . . .	95	66	65	30	34	13	1	1	305
17 " " 21 . . .	254	196	132	69	52	38	5	4	750
21 " " 30 . . .	282	198	130	52	72	28	14	5	781
30 " " 40 . . .	125	87	61	30	33	7	9	2	354
40 " " 50 . . .	105	83	56	28	29	6	8	2	317
50 " " 60 . . .	118	74	47	27	34	10	6	2	318
60 and over . . .	215	159	82	43	62	21	2	1	585
Not stated . . .	1	3	..	..	..	..	1	..	5
<b>Total</b> . . .	<b>1,249</b>	<b>923</b>	<b>594</b>	<b>292</b>	<b>332</b>	<b>130</b>	<b>50</b>	<b>20</b>	<b>3,590</b>
PERSONS INJURED									
Under 5 . . .	1,051	835	355	297	246	67	35	31	2,917
5 and under 7 . . .	589	444	172	141	116	41	11	21	1,535
7 " " 17 . . .	4,017	2,453	1,504	1,301	826	316	42	154	10,613
17 " " 21 . . .	8,609	4,608	2,791	2,401	1,619	574	139	324	21,065
21 " " 30 . . .	8,860	5,266	2,523	1,883	1,594	409	359	299	21,193
30 " " 40 . . .	4,155	2,437	1,108	938	785	176	160	142	9,901
40 " " 50 . . .	3,510	2,074	1,014	834	668	152	88	102	8,442
50 " " 60 . . .	2,754	1,536	819	613	470	122	41	61	6,416
60 and over . . .	2,606	1,511	755	570	481	110	16	39	6,088
Not stated . . .	509	207	346	1,154	523	89	35	3	2,866
<b>Total</b> . . .	<b>36,660</b>	<b>21,371</b>	<b>11,387</b>	<b>10,132</b>	<b>7,328</b>	<b>2,056</b>	<b>926</b>	<b>1,176</b>	<b>91,036</b>

(a) See footnote (a) to table above.



## Types of accidents

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a)**  
**NUMBER OF ACCIDENTS AND PERSONS KILLED OR INJURED, BY TYPE OF ACCIDENT**  
**STATES AND TERRITORIES, 1971**

<i>Type of accident</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
NUMBER OF ACCIDENTS									
Collisions between vehicles . . . .	15,188	8,509	4,103	4,222	3,041	732	280	489	36,564
Vehicle overturning or leaving road . .	3,387	1,014	2,542	851	1,209	373	228	208	9,812
Vehicle colliding with pedestrian . . . .	4,258	2,513	917	808	705	227	49	94	9,571
Vehicle colliding with fixed object(b) .	3,400	2,763	397	1,380	143	44	86	44	8,257
Passenger accidents .	141	71	43	48	19	4	5	8	339
Vehicle colliding with animal . . . .	200	81	92	48	26	3	12	6	468
Other . . . . .	1	72	53	29	35	2	..	7	199
<b>Total . . . .</b>	<b>26,575</b>	<b>15,023</b>	<b>8,147</b>	<b>7,386</b>	<b>5,178</b>	<b>1,385</b>	<b>660</b>	<b>856</b>	<b>65,210</b>

PERSONS KILLED									
Collisions between vehicles . . . .	550	401	267	125	121	59	11	13	1,547
Vehicle overturning or leaving road . .	222	59	208	51	125	45	24	4	738
Vehicle colliding with pedestrian . . . .	247	219	77	54	66	26	8	2	699
Vehicle colliding with fixed object(b) .	218	230	22	55	10	..	5	1	541
Passenger accidents .	10	6	3	5	4	..	2	..	30
Vehicle colliding with animal . . . .	2	3	6	..	1	..	..	..	12
Other . . . . .	..	5	11	2	5	..	..	..	23
<b>Total . . . .</b>	<b>1,249</b>	<b>923</b>	<b>594</b>	<b>292</b>	<b>332</b>	<b>130</b>	<b>50</b>	<b>20</b>	<b>3,590</b>

PERSONS INJURED									
Collisions between vehicles . . . .	22,593	13,277	6,316	5,996	4,696	1,209	408	733	55,228
Vehicle overturning or leaving road . .	4,610	1,574	3,468	1,281	1,690	562	336	268	13,789
Vehicle colliding with pedestrian . . . .	4,293	2,400	902	789	679	210	46	93	9,412
Vehicle colliding with fixed object(b) .	4,763	3,889	497	1,927	178	64	113	60	11,491
Passenger accidents .	159	67	41	49	16	5	3	8	348
Vehicle colliding with animal . . . .	241	91	111	59	28	4	20	6	560
Other . . . . .	1	73	52	31	41	2	..	8	208
<b>Total . . . .</b>	<b>36,660</b>	<b>21,371</b>	<b>11,387</b>	<b>10,132</b>	<b>7,328</b>	<b>2,056</b>	<b>926</b>	<b>1,176</b>	<b>91,036</b>

(a) Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. (b) Includes parked vehicles.

## ROADS

## Summary of roads used for general traffic

*Proclaimed or declared roads.* The table following is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30 June 1972. The central road authority in each State assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance of these roads, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points: availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; the value of the roads as connecting links between centres of population or business; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main roads. The absence of a particular class in any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes, e.g. insufficiency of funds, man-power or materials, etc., construction or maintenance may not keep pace with gazettals of mileages, and, therefore, the condition of a road may not match its status.

**PROCLAIMED OR DECLARED ROADS: LENGTHS, STATES, 30 JUNE 1972**  
(Miles)

<i>Class of road</i>	<i>N.S.W.</i>	<i>Vic.(a)</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.(b)</i>	<i>Tas.</i>	<i>Total</i>
State highways . . .	6,565	(c)4,498	6,314			1,197	
Trunk roads . . .	4,375	9,076	77	8,156	7,651	..	65,122
Ordinary main roads . .	11,513		5,039			662	
<i>Total main roads . .</i>	<i>22,452</i>	<i>13,574</i>	<i>11,430</i>	<i>8,156</i>	<i>7,651</i>	<i>1,859</i>	<i>65,122</i>
Secondary roads . . .	(d)177	..	(e)8,574	..	5,434	187	14,372
Developmental roads . .	2,553	..	4,772	..	..	89	7,414
Tourist roads . . .	251	483	..	..	..	47	781
Other roads . . .	..	(f)646	..	..	..	..	646
<i>Total other roads . .</i>	<i>2,981</i>	<i>1,129</i>	<i>13,346</i>	<i>..</i>	<i>5,434</i>	<i>323</i>	<i>23,213</i>
<b>Grand total . . .</b>	<b>25,433</b>	<b>14,703</b>	<b>24,776</b>	<b>8,156</b>	<b>13,086</b>	<b>2,182</b>	<b>88,336</b>

(a) Includes only roads declared by the Country Roads Board. Does not include 8 miles of metropolitan freeways constructed by the Melbourne and Metropolitan Board of Works. (b) Main Roads Department revised series. (c) Includes 70 miles of freeways constructed by the Country Roads Board. (d) Metropolitan only. (e) Includes mining access roads, farmers' roads and tourist tracks. (f) Forest roads.

*Total roads.* The following table represents an attempt to classify all the roads open for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

**ALL ROADS OPEN FOR GENERAL TRAFFIC**  
**LENGTHS, STATES AND TERRITORIES, 30 JUNE 1972**  
(Miles)

<i>Surface of roads</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Total</i>
Bitumen or concrete .	37,702	33,237	22,319	11,146	17,646	3,910	2,694	714	129,368
Gravel, crushed stone or other improved surface . . .	40,642	28,927	19,429	13,464	18,350	8,333	1,061	241	130,447
Formed only . . .	24,778	19,603	38,515	15,192	26,769	618	1,981	26	276,986
Cleared only . . .	26,105	17,310	39,999	23,073	36,857		6,160	..	
<b>Total . . .</b>	<b>129,227</b>	<b>99,077</b>	<b>120,263</b>	<b>62,875</b>	<b>99,624</b>	<b>12,861</b>	<b>11,895</b>	<b>981</b>	<b>536,801</b>

Further information on roads, including financial particulars, is included in Chapter 18. Public Authority Finance.

### National Association of Australian State Road Authorities

The National Association of Australian State Road Authorities (N.A.A.S.R.A.) was established in 1934 under the title 'Conference of State Road Authorities of Australia', the present name being adopted in 1959. Initially the member authorities were the central road authority in each State but in 1949 this was extended to include the Commonwealth Department of Works. The present member authorities are: Department of Main Roads, New South Wales; Country Roads Board, Victoria; Main Roads Department, Queensland; Highways Department, South Australia; Main Roads Department, Western Australia; Department of Public Works, Tasmania; Commonwealth Department of Works.

These authorities are directly responsible for the construction and maintenance of the primary road system which comprises approximately 14 per cent of roads in Australia. The primary roads, generally termed 'main roads', include the principal routes between States, routes linking large cities and regions within the States and certain major arterial roads. The authorities also have a limited responsibility for some secondary roads serving primary and secondary industry, and tourist roads.

The Association's objectives are to provide a central organisation where, by co-operative effort, a uniform approach to the improvement, planning and development of the Australian road system can be achieved. This is done by gathering together experienced engineers and administrators from the member Authorities into a series of committees to develop national standards for road and bridge design, construction and maintenance and to improve methods of administration and financial control. The policies and standards published are widely used by local government authorities and by universities as standard textbooks for courses in road engineering. For structural design, road signs, manufactured items and standard laboratory test procedures it has been a long standing policy of the Association to participate with the Standards Association of Australia in the preparation of national codes of practice.

One item of continuing interest to the Association is road research and in 1959 the Association decided to establish and finance a separate national road research centre. This centre, the Australian Road Research Board (A.R.R.B.), was established in 1960 as a company controlled by a Board consisting of the N.A.A.S.R.A. members. The director and staff of A.R.R.B. regularly report to the N.A.A.S.R.A. executive and technical committees the results and progress of research undertaken for N.A.A.S.R.A. and the individual road authorities.

The Association also assists the Australian Government in a number of national and international projects. Within Australia direct grants are made for the construction of a number of roads and the Association has provided the basic data for the two Australian Roads Surveys. These surveys are conducted regularly in conjunction with the Commonwealth Bureau of Roads and form the basis for determining the Australian Government's policy on financial aid for roads. The Association also regularly confers with the Commonwealth Department of Transport, the Commonwealth Bureau of Roads and Australian Transport Advisory Council on major roading policies. As part of the Australian Government's external aid program and in conjunction with the Department of Foreign Affairs, member authorities of the Association conduct engineering training courses for experienced engineers from African and Asian countries.

The secretarial services of the Association are provided by a small staff located in Sydney. This office maintains contact with overseas road bodies and acts as a centre for the receipt and circulation of standards published by these organisations.

### Australian Road Research Board

The Australian Road Research Board was established by the road authorities of the Commonwealth and State Governments in 1960 as a national centre for road research. The Board was incorporated in January 1965 as a public company limited by guarantee, memoranda and articles of association being drafted in general conformity with the constitution which had been accepted in 1960. The company members are the Commonwealth of Australia, the commissioners of the central road authorities in New South Wales, Queensland, South Australia, and Western Australia, the Department of Public Works, Tasmania, and the Country Roads Board, Victoria. The Director-General of the Commonwealth Department of Public Works and the departmental heads of the other road authorities constitute the Board, which controls all policy and activities. Finance for all activities has been provided by the company members on an agreed basis.

The objectives of A.R.R.B. include planning an adequate program of research and development, arranging for individual projects to be carried out directly and by co-operating organisations, and providing conferences and publications to bring these and other advances to everyone interested in roads. Publications include *Proceedings* of biennial national research conferences commencing in 1962, the journal *Australian Road Research* issued four times a year, and separate reports and bulletins resulting from special research projects. The following list of possible subjects indicates



the range of studies provided for in the original constitution: road planning, location, design, safety, materials, construction, maintenance, structures, equipment, traffic and transport, economics, administration, financing, management, accounting, and any other matters affecting the provision, upkeep, use, protection, and development of roads. In planning a creative program the Board continues to look for those subjects which seem to offer the highest profit to road engineers and the community.

The work on research projects is carried out either directly by the Board's own staff, in many cases acting in co-operation with the road authorities of the various governments, or through co-operative projects established with universities. The Board has endeavoured to provide or sustain the additional staff required for these external projects, but university staff members furnish advice and co-operation in all parts of these studies.

As with most research organisations, the Board has made very full use of systematic consultation through various advisory groups. Members of these groups have been recruited from persons with the ability to contribute, who were prepared to serve as individuals and not as representatives of particular organisations. In an attempt to secure completely unfettered counsel, most of the members of the advisory groups were drawn from outside the Board and its staff. The various committees include a general Advisory Council and several particular types of specialist committees. In addition, the technical committees of the National Association of Australian State Road Authorities have, from the initiation of A.R.R.B., been a continuing and valuable source of advice and consultation. In this way, therefore, exceedingly valuable advice has been obtained from individuals drawn from the State road authorities, local authorities, C.S.I.R.O., Australian universities, several Commonwealth departments, and from private companies and consultants.

#### **Commonwealth Bureau of Roads**

The Commonwealth Bureau of Roads is a Statutory Authority established under the provisions of the *Commonwealth Bureau of Roads Act 1964*. The Bureau consists of a full-time Chairman and two part-time members appointed by the Governor-General and is served by a small secretariat. Broadly, the responsibilities of the Bureau are to advise the Commonwealth Government, through the Minister for Transport, on matters relating to roads and road transport and government financial assistance in this area.

## **CIVIL AVIATION**

#### **Department of Civil Aviation**

Control of civil aviation in Australia is exercised by the Department of Civil Aviation which was established in 1939 to take over from the Civil Aviation Board the regulation of civil aviation in Australia. The Department's jurisdiction covers not only Australia but also Papua New Guinea and areas of the Indian and Pacific Oceans. Year Books Nos 16, 19 and 38 trace the establishment of civil aviation control in Australia and the appropriate Acts of Parliament and Regulations under which this control is exercised. The present functions of the Department are shown in Year Book No. 51, pages 578-9, and further details about its operations are given in the annual reports to the Commonwealth Parliament by the Minister for Civil Aviation.

#### **Regular air services within Australia**

*Interstate services.* Scheduled interstate services with passenger and all-freight aircraft are provided by two airlines only, the private enterprise airline Ansett Airlines of Australia (a subsidiary of Ansett Transport Industries) and the Commonwealth-owned Trans-Australia Airlines. All principal routes are competitive, with both airlines providing equal capacities in accord with legislation passed by the Commonwealth Parliament. The two principal Acts which establish the legislative basis of this controlled competition are the *Airlines Agreement Act 1952-1961* and the *Airlines Equipment Act 1958*. The Airlines Equipment Act established the machinery for the achievement and maintenance of comparable, but not necessarily identical, aircraft fleets between T.A.A. and Ansett Airlines of Australia, and is designed to prevent the provision of excess aircraft capacity. The Airlines Agreement Act established the basis of control of the two-airline competitive system and extended this machinery to 1977.

In addition to purely interstate services, both Ansett Airlines of Australia and Trans-Australia Airlines operate routes to Papua New Guinea and non-competitive intrastate routes in Australia. The Ansett Airlines of Australia non-competitive routes radiate mainly from Melbourne, while those of Trans-Australia Airlines are located within Queensland. In addition, Trans-Australia Airlines operate services within Papua New Guinea in competition with Ansett Airlines of Papua New Guinea.

At 30 June 1972 the Ansett Airlines of Australia fleet included six Boeing 727's, twelve DC-9's, twelve Friendships, two Carvairs, one DC-4 and two helicopters. At the same date Trans-Australia Airlines operated a fleet of six Boeing 727's, twelve DC-9's, twelve Friendships and six Twin Otter DHC-6.

*Intrastate services.* In addition to the intrastate services operated by Ansett Airlines of Australia and Trans-Australia Airlines there are a number of smaller regional airlines operating from Sydney (Airlines of New South Wales and East-West Airlines), Adelaide (Airlines of South Australia), Perth (MacRobertson Miller Airlines), and Alice Springs (Connair). With the exception of Connair, which provides regular service to outback homesteads and communities, all of these are concerned primarily with traffic moving to and from the respective capital city. With the exception of the independently owned East-West Airlines and Connair, all regional airlines are subsidiaries of Ansett Transport Industries. The larger aircraft used by these regional airlines are Fellowships, Friendships and Convairs. Connair uses smaller aircraft types.

*Commuter services.* These are not airline services but regular flights by charter firms with small single and twin-engined aircraft operating to fixed and published timetables. They provide regular air links between many centres, towns and country areas which are either not served by the major airlines or have no direct air service with their capital or nearest major provincial city. The first commuter service approved was for Opal Air Pty Ltd, of Coober Pedy (S.A.), to operate between Adelaide and the South Australian opal fields. At 30 June 1972 twenty-one charter operators were operating commuter services in Australia. Details of the operations of these commuter services are excluded from the statistics shown in this section.

*Internal operations.* Particulars of the revenue operations of all regular internal air services during each of the years 1967-68 to 1971-72 are set out in the next table.

**CIVIL AVIATION: OPERATIONS OF REGULAR INTERNAL SERVICES  
AUSTRALIA(a), 1967-68 TO 1971-72**

	1967-68	1968-69	1969-70	1970-71	1971-72
Hours flown . . . . . number	240,801	244,606	251,582	258,793	248,774
Miles flown . . . . . '000	56,724	60,348	66,241	71,212	72,036
Passengers—					
Embarkations . . . . . number	4,668,153	5,184,828	5,911,002	6,340,036	6,629,316
Passenger-miles . . . . . '000	2,125,314	2,401,783	2,802,717	3,090,837	3,278,680
Freight—					
Tons uplifted . . . . . short tons	85,063	89,947	100,100	100,752	99,079
Ton-miles(b) . . . . . '000	42,320	45,521	51,021	53,457	52,380
Mail—					
Tons uplifted . . . . . short tons	9,417	9,876	10,625	10,931	11,174
Ton-miles(b) . . . . . '000	5,174	5,498	5,950	6,390	6,568

(a) Includes flights of all Australian-owned airlines, with the exception of those of Qantas Airways Limited, between airports located within the Commonwealth. (b) In terms of short tons.

*Internal passenger embarkations and disembarkations*

Traffic statistics have been compiled by aggregating for all individual airline flights the traffic loaded and unloaded at each airport. Flights between Australia and Papua New Guinea and Australia and Norfolk Island are included. At ports where different flights connect, figures are overstated to the extent of the through traffic transferring between flights.

**INTERNAL AIRWAYS PASSENGER EMBARKATIONS AND  
DISEMBARKATIONS AT PRINCIPAL AUSTRALIAN AIRPORTS  
1967-68 TO 1971-72**

<i>Airport</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Sydney . . .	2,641,147	2,933,795	3,390,322	3,515,231	3,694,498
Melbourne . . .	2,043,542	2,278,032	2,603,320	2,750,602	2,861,896
Brisbane . . .	937,660	1,009,060	1,184,846	1,347,118	1,448,920
Adelaide . . .	863,652	930,207	1,016,689	1,019,320	1,046,840
Canberra . . .	410,701	461,888	541,791	596,171	670,608
Perth . . .	315,744	357,236	420,603	510,328	545,890
Hobart . . .	182,459	196,335	200,638	222,397	227,016
Launceston . . .	156,443	171,612	179,614	197,500	208,090
Townsville . . .	188,761	168,247	197,107	197,942	202,160
Coolangatta . . .	85,543	102,764	132,102	166,239	188,917
Cairns . . .	92,048	101,031	127,252	158,986	182,300
Mackay . . .	78,179	87,313	95,841	125,220	133,806
Darwin . . .	65,535	78,165	98,523	118,375	131,703
Rockhampton . . .	68,150	74,760	83,883	97,264	101,685
Devonport . . .	61,250	68,125	68,257	71,426	75,388
Wynyard . . .	54,888	57,132	63,041	65,563	70,597
Mount Isa . . .	34,013	37,423	52,272	67,938	69,760
Alice Springs . . .	34,953	39,549	52,522	57,299	65,497
Tamworth . . .	41,960	46,558	51,640	50,870	59,557
Wagga . . .	46,314	49,519	54,378	52,181	52,511
Dubbo . . .	49,856	51,775	56,014	55,574	50,827
Kingscote . . .	44,316	45,993	50,878	51,135	47,993

### International activity

*International organisations.* A full report of the formation of the International Civil Aviation Organization, the Commonwealth Air Transport Council, and the South Pacific Air Transport Council appeared in Year Book No. 37, and particulars of subsequent activity in the international field were included in No. 38. The International Civil Aviation Organization had a membership of 125 nations in June 1972. Australia has continued its position as a member of the Council, which it has held since I.C.A.O. was established in 1947. Further details will be found in Year Book No. 40 and earlier issues.

*International Agreements.* Australia had air service agreements in force with twenty-three countries at 30 June 1972. They were Austria, Britain, Canada, Ceylon, Egypt, France, Federal Republic of Germany, Greece, India, Indonesia, Ireland, Italy, Japan, Lebanon, Malaysia, Nauru, Netherlands, New Zealand, Philippines, Singapore, Republic of South Africa, Thailand, and the United States of America. Under these agreements Australia is granted rights to operate services between Australia to and through the countries in question; these rights are exercised by Australia's international airline Qantas. In return, the designated airlines of the other countries which are partners to these agreements are granted traffic rights in Australia. Australia also had air service arrangements granting traffic rights with eight other countries at 30 June 1972. These were Bahrain, Fiji, Iran, Mauritius, Mexico, Portugal, Syria and Turkey.

*International air services.* At 30 June 1972, twenty-two overseas international airlines were operating regular scheduled services to Australia. These are: Air-India (India), Air Nauru (Nauru), Air New Zealand (New Zealand), Air Pacific (Fiji), Alitalia (Italy), American Airlines (United States of America), British Overseas Airways Corporation (Britain), Canadian Pacific Air Lines (Canada), Cathay Pacific (Britain), Deutsche Lufthansa (Federal Republic of Germany), Garuda (Indonesia), Japan Air Lines (Japan), K.L.M. Royal Dutch Airlines (Netherlands), Singapore International Airlines (Singapore), Merpati Nusantara Airlines (Indonesia), Olympic Airways (Greece), Pan American World Airways (United States of America), Philippine Air Lines (Philippines), South African Airways (Republic of South Africa), Thai International (Thailand) and Union de Transport



Aeriens (France). Trans-Australia Airlines operates between Darwin and Portuguese Timor under charter to Transportes Aereos de Timor. Qantas, Australia's international airline, operates a fleet of twenty-nine aircraft of which twenty-one are Boeing 707-338C jet aircraft and four are Boeing 747B superjet aircraft. All the shares in Qantas Airways Limited are owned by the Commonwealth Government.

*International operations.* The table following shows particulars of international airline traffic during 1971-72 moving into and out of an area which embraces the Commonwealth of Australia, Papua New Guinea, and Norfolk Island. These figures do not include traffic between Australia and Papua New Guinea and Norfolk Island.

**CIVIL AVIATION: INTERNATIONAL AIRLINE TRAFFIC  
TO AND FROM AUSTRALIA(a), 1971-72**

<i>Type of traffic</i>	<i>Aircraft movements</i>	<i>Passengers</i>	<i>Freight</i>	<i>Mail</i>
			short tons	short tons
Traffic to Australia—				
Qantas Airways Limited . . .	3,606	289,331	9,300	722
Other airlines . . .	5,675	434,152	12,190	2,873
<b>All airlines . . .</b>	<b>9,281</b>	<b>723,483</b>	<b>21,490</b>	<b>3,595</b>
Traffic from Australia—				
Qantas Airways Limited . . .	3,645	288,844	7,216	1,571
Other airlines . . .	5,647	421,412	8,175	698
<b>All airlines . . .</b>	<b>9,292</b>	<b>710,256</b>	<b>15,391</b>	<b>2,269</b>

(a) Australian mainland and adjacent Territories (Papua New Guinea and Norfolk Island).

Particulars of revenue operations of Australia's regular overseas services are shown in the following table. These operations include all stages of Qantas flights linking Australia with external territories and overseas countries, and stages external to the Commonwealth for flights of other Australian-owned airlines; they exclude flights over stages located within Papua New Guinea.

**CIVIL AVIATION: OPERATIONS OF AUSTRALIA'S REGULAR OVERSEAS SERVICES  
1967-68 TO 1971-72**

	1967-68	1968-69	1969-70	1970-71	1971-72
Hours flown . . . . . number	70,611	74,757	84,684	97,307	91,357
Miles flown . . . . . '000	31,914	33,591	37,537	43,711	41,178
Passengers—					
Embarkations . . . . . number	562,855	642,524	751,315	839,629	885,548
Passenger-miles . . . . . '000	1,970,008	2,247,241	2,498,180	2,763,179	3,039,775
Freight—					
Tons uplifted . . . . . short tons	13,733	18,537	21,165	23,650	23,105
Ton-miles(a) . . . . . '000	67,733	92,488	103,717	106,262	98,297
Mail—					
Tons uplifted . . . . . short tons	3,170	2,862	2,925	3,107	3,132
Ton-miles(a) . . . . . '000	19,209	15,680	15,143	15,659	16,868

(a) In terms of short tons.

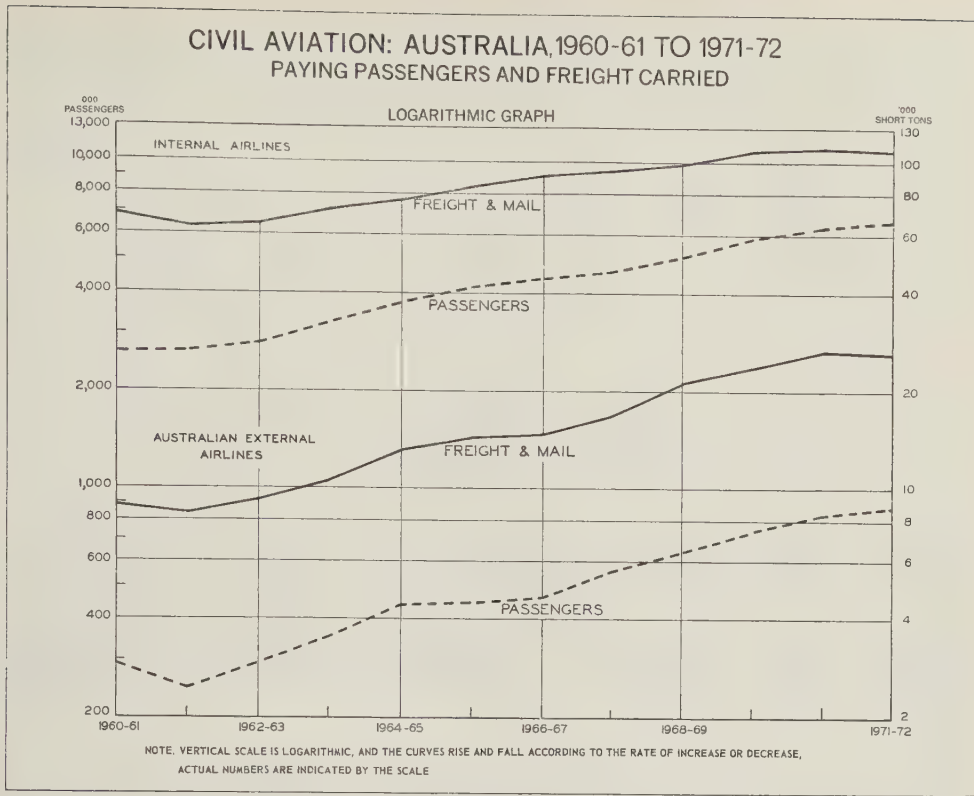


PLATE 29

### General aviation

General aviation activity, which covers all non-airline operations such as charter, aerial work and private flying, has grown rapidly throughout Australia in the post-war period so that now it is an important sector of the Australian aviation industry. In 1972, hours flown totalled 1,013,000 compared with 565,000 hours flown by Australian airline aircraft. At 30 June 1972, aircraft employed in general aviation numbered 3,802.

### Aerodromes

The number of aerodromes throughout Australia and its External Territories at 30 June 1972 was 705. One hundred and fourteen were owned by the Commonwealth Government and 591 by local authorities and private interests. Capital expenditure on aerodrome and building construction was \$28.6 million in 1971-72. Maintenance expenditure on Commonwealth-owned aerodromes during 1971-72 was \$2.3 million, and development and maintenance grants to licensed aerodromes participating in the Local Ownership Plan totalled \$1.05 million.

### Airways facilities

A total of 407 navigational aids were in service at 30 June 1972. The total includes 229 non-directional beacons (NDB), 106 distance measuring equipment (DME), 20 visual-aural ranges (VAR), 33 VHF Omni-directional ranges (VOR), 17 instrument landing systems (ILS) and 2 twin locator approach systems.

One hundred and twenty-seven aerodromes are now equipped with night landing facilities and sixty-nine visual approach slope indicators (VASIS) are now operating comprising sixty-seven Australian designed 'T' systems and two Red-White systems.

Six long range surveillance radars are in operation.

**Civil aviation registrations, licences, etc., in force in Australia**

At 30 June 1972 there were 3,802 aircraft registered in Australia. There were also, at 30 June 1972, 28,214 pilots' licences in force of which 12,738 were private pilots' licences, 3,274 commercial pilots' licences, and 9,844 student pilots' licences. Flight radio-telephone operators' licences numbered 19,813.

**Accidents and casualties**

**CIVIL AVIATION: ACCIDENTS INVOLVING CASUALTIES(a)  
AUSTRALIA(b), 1967-68 TO 1971-72**

	1967-68	1968-69	1969-70	1970-71	1971-72
Number . . . . .	36	17	47	31	28
Persons killed . . . . .	47	47	49	48	37
Persons seriously injured . . . . .	29	20	41	24	23

(a) Accidents involving civil aircraft which resulted in death or serious injury. Excludes parachutists killed on contact with earth after an uninterrupted fall. (b) Excludes accidents outside Australia involving aircraft on the Australian register.

**POSTS: INTERNAL AND OVERSEAS TELECOMMUNICATION SERVICES  
RADIOCOMMUNICATION STATIONS**

In this division particulars for the Australian Capital Territory are included with those for New South Wales, and the South Australian figures include particulars for the Northern Territory, unless otherwise indicated. The Central Office of the Postmaster-General's Department is located in Melbourne, Victoria.

**Postmaster-General's Department—General**

Under the provisions of the *Post and Telegraph Act* 1901-1971 the Postmaster-General's Department is responsible for the control and operation of postal, telegraphic and telephonic services throughout Australia. The Postmaster-General's Department is also responsible for the provision and operation of the transmitters and technical facilities, other than studio equipment, required for broadcasting and television services by the Australian Broadcasting Commission (*see* pages 387-91), and, in conjunction with the Overseas Telecommunications Commission (*see* pages 385-7), with whom there is close co-operation, provides facilities for communication with overseas countries. Subsidiary to its major activities, the Postmaster-General's Department performs a number of important functions for other Commonwealth and State departments including the collection of broadcast and television licence fees, war service and repatriation repayments, the provision of banking facilities on behalf of the Commonwealth Savings Bank, the sale of tax and duty stamps, the collection of land tax and the over-the-counter distribution of a variety of official forms.

**Research**

The Postmaster-General's Department maintains its own research facilities as part of the headquarters organisation in Melbourne. The P.M.G. Research Laboratories had an establishment in 1972 of 430 including 150 professional staff, mainly engineers, physicists, chemists and metallurgists. The main responsibilities of the laboratories are to conduct research and development in telecommunications theory and practice, particularly as applying to the Australian region; to appraise new developments in telecommunication equipment, and to design apparatus and systems required for special applications in the telecommunications and mail handling networks in Australia in cases where these needs could not be met from commercial sources.

**Postal facilities**

The following table shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices), and the number of inhabitants to each 100 square miles in each State and in Australia at 30 June 1972.



**POSTAL FACILITIES: RELATION TO AREA AND POPULATION, STATES**  
**30 JUNE 1972**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Post offices—							
Official . . . . .	512	333	220	175	161	46	1,447
Non-official . . . . .	1,596	1,357	876	651	422	288	5,190
<b>Total post offices . . . . .</b>	<b>2,108</b>	<b>1,690</b>	<b>1,096</b>	<b>826</b>	<b>583</b>	<b>334</b>	<b>6,637</b>
Square miles of territory per office . . . . .	147	52	609	1,090	1,674	79	447
Inhabitants per office . . . . .	2,297	2,108	1,719	1,557	1,816	1,177	1,963
Inhabitants per 100 square miles . . . . .	1,560	4,052	282	143	109	1,489	439

**Employment**

**PERSONS PROVIDING POST OFFICE SERVICES: CENTRAL OFFICE AND STATES**  
**30 JUNE 1972**

	<i>Central Office</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Official full-time staff (a)—								
Permanent officers . . . . .	2,948	27,709	20,762	12,164	8,831	6,777	2,758	81,949
Temporary and exempt employees . . . . .	206	13,332	8,157	3,352	1,678	2,530	600	29,855
<b>Total . . . . .</b>	<b>3,154</b>	<b>41,041</b>	<b>28,919</b>	<b>15,516</b>	<b>10,509</b>	<b>9,307</b>	<b>3,358</b>	<b>111,804</b>
Other(b)—								
Non-official postmasters and post-mistresses . . . . .	..	1,657	1,350	884	654	423	237	5,205
Other staff at non-official offices . . . . .	..	514	506	316	202	72	27	1,637
Telephone office-keepers . . . . .	..	124	28	266	71	143	6	638
Mail contractors (including persons employed to drive vehicles) . . . . .	..	1,520	824	1,013	256	297	128	4,038
<b>Total . . . . .</b>	<b>..</b>	<b>3,815</b>	<b>2,708</b>	<b>2,479</b>	<b>1,183</b>	<b>935</b>	<b>398</b>	<b>11,518</b>
<b>Grand total . . . . .</b>	<b>3,154</b>	<b>44,856</b>	<b>31,627</b>	<b>17,995</b>	<b>11,692</b>	<b>10,242</b>	<b>3,756</b>	<b>123,322</b>

(a) Persons directly under the control of the Department. Excludes 3,242 part-time staff. (b) Persons not directly under the control of the Department. Includes persons employed, either full-time or part-time, under contract or in return for payments appropriate to work performed.

**Financial operations—Postmaster-General's Department**

The financial tables which follow allow for the changed accounting arrangements introduced by the Postmaster-General's Department following amendment of the Post and Telegraph Act in 1968.

**Earnings**

The following table shows the earnings of the Postmaster-General's Department as taken from successive Profit and Loss Statements.

**POSTMASTER-GENERAL'S DEPARTMENT: EARNINGS, BY SOURCE**  
**AUSTRALIA, 1962-63 TO 1971-72**  
**(\$'000)**

<i>Year</i>	<i>Postal service</i>			<i>Telecommunications service</i>						<i>Total</i>
	<i>Postages</i>	<i>Money order and postal order fees</i>	<i>Commission on agency services</i>	<i>Other earnings</i>	<i>Telephone rentals</i>	<i>Telephone calls</i>	<i>Telegrams</i>	<i>Leased telegraph services</i>	<i>Other earnings (a)</i>	
1962-63	91,835	2,501	3,501	2,008	59,913	117,570	9,831	4,844	10,936	302,939
1963-64	97,842	2,638	3,976	2,121	64,422	129,736	10,641	5,172	12,746	329,293
1964-65	103,032	2,722	4,243	2,194	82,175	142,722	11,423	5,847	15,687	370,045
1965-66	107,402	2,771	4,277	2,296	93,856	154,304	11,639	6,144	18,585	401,274
1966-67	110,317	2,919	4,300	2,452	100,823	171,100	11,868	7,018	20,691	431,488
1967-68	127,748	3,178	4,406	2,847	108,293	211,812	14,172	7,478	22,722	502,656
1968-69	142,770	3,400	5,591	3,175	116,974	245,371	14,711	8,145	26,872	567,208
1969-70	149,036	3,505	5,698	3,628	126,669	280,757	15,120	9,253	31,579	625,244
1970-71	171,548	4,246	6,348	3,457	153,658	312,111	17,369	10,880	35,996	715,613
1971-72	196,361	4,618	7,857	4,528	184,975	387,538	17,284	12,965	42,367	858,493

(a) Includes fees for advertisements in telephone directories, proceeds of sales of fixed assets, telephone service connection fees and telex call fees.

**Expenses**

This table shows the operating and maintenance expenses of the Postmaster-General's Department as taken from successive Profit and Loss Statements.

**POSTMASTER-GENERAL'S DEPARTMENT: EXPENSES, BY SOURCE**  
**AUSTRALIA, 1962-63 TO 1971-72**  
 (\$'000)

Year	Postal service			Telecommunications service			Total
	Operating maintenance and general	Carriage of mail	Depreciation, super- annuation, long service leave and interest	Operating and general	Main- tenance of plant	Depreciation, super- annuation, long service leave and interest	
1962-63 . . .	65,107	25,304	8,384	57,483	55,318	92,868	304,465
1963-64 . . .	69,655	26,682	9,284	62,651	58,290	103,325	329,887
1964-65 . . .	75,987	28,710	10,111	69,637	60,269	121,118	365,833
1965-66 . . .	84,868	31,143	11,077	74,451	66,489	133,370	401,398
1966-67 . . .	95,775	32,395	15,398	83,154	74,063	152,205	452,991
1967-68 . . .	107,016	33,114	18,209	92,614	83,645	177,707	512,305
1968-69 . . .	106,682	35,678	21,277	101,861	95,022	198,651	559,171
1969-70 . . .	123,615	34,911	23,208	116,920	105,711	218,897	623,262
1970-71 . . .	144,352	37,722	29,014	135,321	121,731	249,116	717,256
1971-72 . . .	155,306	34,880	34,431	154,587	138,123	281,366	798,694

**Profit or Loss**

The following table shows the net results of the Department's operations for the year 1971-72 together with summarised particulars for the year 1970-71.

**POSTMASTER-GENERAL'S DEPARTMENT**  
**CONSOLIDATED STATEMENT OF PROFIT AND LOSS, AUSTRALIA, 1970-71 AND 1971-72**  
 (\$'000)

	1970-71	1971-72		
	All services	Postal service	Telecommuni- cations service	All services
Earnings . . . . .	715,613	213,364	645,129	858,493
Expenses—				
Operating, maintenance and general . . . . .	439,126	190,186	292,710	482,896
Depreciation . . . . .	127,789	4,496	135,244	139,740
Superannuation . . . . .	26,855	11,907	21,063	32,970
Long service leave . . . . .	9,123	4,261	7,452	11,713
Total expenses . . . . .	602,893	210,850	456,469	667,319
Profit or loss before interest . . . . .	112,720	2,514	188,660	191,174
Interest . . . . .	114,363	13,767	117,607	131,374
Profit or loss after interest . . . . .	-1,643	-11,253	71,052	59,799

Minus sign (-) denotes loss.

**Fixed assets, Postmaster-General's Department**

**POSTMASTER-GENERAL'S DEPARTMENT: TRANSACTIONS AFFECTING FIXED ASSETS**  
**1971-72**  
**(\$'000)**

<i>Class of plant</i>	<i>Value at 1 July 1971</i>	<i>Additions during year</i>	<i>Instalments of plant written out</i>	<i>Value at 30 June 1972</i>
Telecommunications plant . . . . .	2,694,627	340,322	33,749	(a)3,001,200
Postal plant . . . . .	20,641	2,585	122	23,103
Engineers' moveable plant . . . . .	47,237	7,257	2,732	51,761
Motor vehicles . . . . .	32,829	12,274	7,779	37,325
Other plant and equipment . . . . .	48,302	7,387	1,967	53,722
Buildings . . . . .	324,958	48,433	..	(b)373,392
Land . . . . .	32,665	8,900	121	41,444
<b>Total . . . . .</b>	<b>3,201,259</b>	<b>427,157</b>	<b>46,470</b>	<b>3,581,946</b>

(a) Includes plant under construction valued at \$142,948,000.  
 \$30,135,000.

(b) Includes buildings under construction valued at

**Postal services****Mail delivery network****MAIL DELIVERY NETWORK(a): STATES, 31 MARCH 1972**

<i>State</i>	<i>Number of mail delivery points</i>				
	<i>Postmen's delivery</i>	<i>Roadside delivery</i>	<i>Private boxes</i>	<i>Private and free bags</i>	<i>Poste restante(b)</i>
New South Wales . . . . .	1,456,328	84,525	110,354	7,024	51,865
Victoria . . . . .	990,098	56,206	65,064	7,542	38,960
Queensland . . . . .	479,161	47,333	57,962	6,488	35,704
South Australia . . . . .	368,912	2,797	44,318	4,884	21,794
Western Australia . . . . .	264,045	17,667	41,549	1,067	17,397
Tasmania . . . . .	89,029	4,669	12,191	1,494	15,218
<b>Australia . . . . .</b>	<b>3,647,573</b>	<b>213,197</b>	<b>331,438</b>	<b>28,499</b>	<b>180,938</b>

(a) Statistics shown here are from the Mail Delivery Network Survey at 31 March 1972.  
 post offices.

(b) Delivery of mail at

**Postal articles handled**

The following two tables show the number of postal articles handled by the Australian Post Office, according to their State of origin. Each article is counted once only irrespective of the number of times it may be handled in transit.



**POSTAL ARTICLES HANDLED(a): STATES, 1971-72**  
(<sup>0</sup>000)

State	<i>News-papers and</i>				<i>News-papers and</i>			
	<i>Letters</i> (b)	<i>packets</i> (c)	<i>Parcels</i> (d)	<i>Regis-tered</i> <i>articles</i> (e)	<i>Letters</i> (b)	<i>packets</i> (c)	<i>Parcels</i> (d)	<i>Regis-tered</i> <i>articles</i> (e)
	<i>Posted for delivery within Australia</i>				<i>Posted for delivery overseas</i>			
New South Wales . . . . .	830,378	117,765	9,876	2,779	52,180	4,084	490	1,295
Victoria . . . . .	631,969	78,763	5,810	1,929	34,174	2,792	338	586
Queensland . . . . .	302,859	33,050	2,787	1,242	9,180	695	77	66
South Australia . . . . .	200,023	18,897	1,738	660	9,130	690	92	74
Western Australia . . . . .	154,859	12,993	1,193	626	10,124	742	80	103
Tasmania . . . . .	53,259	6,235	303	262	365	54	9	3
<b>Australia . . . . .</b>	<b>2,173,347</b>	<b>267,703</b>	<b>21,707</b>	<b>7,496</b>	<b>115,153</b>	<b>9,057</b>	<b>1,088</b>	<b>2,127</b>
	<i>Received from overseas</i>				<i>Total postal matter dealt with</i>			
New South Wales . . . . .	66,496	9,678	785	1,631	949,054	131,526	11,151	5,705
Victoria . . . . .	50,077	6,049	543	764	716,220	87,605	6,691	3,278
Queensland . . . . .	8,968	2,634	169	35	321,007	36,379	3,033	1,343
South Australia . . . . .	6,692	2,293	94	36	215,845	21,880	1,924	769
Western Australia . . . . .	7,153	3,084	150	75	172,137	16,819	1,423	803
Tasmania . . . . .	1,155	484	39	4	54,780	6,773	352	268
<b>Australia . . . . .</b>	<b>140,542</b>	<b>24,221</b>	<b>1,780</b>	<b>2,543</b>	<b>2,429,041</b>	<b>300,981</b>	<b>24,574</b>	<b>12,166</b>

(a) Number of distinct articles handled. (b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters. (c) Includes newspapers and postal articles not included in letter mail. (d) Includes registered, cash on delivery and duty parcels. (e) Includes registered articles other than parcels.

**POSTAL ARTICLES HANDLED(a): AUSTRALIA, 1967-68 TO 1971-72**  
(<sup>0</sup>000)

Year	<i>Newspapers and</i>			<i>Registered</i> <i>articles</i> (e)	<i>Total</i> <i>postal</i> <i>articles</i> <i>handled</i>
	<i>Letters</i> (b)	<i>packets</i> (c)	<i>Parcels</i> (d)		
1967-68 . . . . .	2,203,089	411,091	20,783	12,908	2,647,871
1968-69 . . . . .	(f)2,205,525	(f)407,922	22,092	12,748	2,648,287
1969-70 . . . . .	(f)2,410,300	(f)336,392	23,682	13,104	2,783,478
1970-71 . . . . .	(g)2,436,846	(g)330,858	24,950	13,234	2,805,887
1971-72 . . . . .	2,429,041	300,981	24,574	12,166	2,766,762

(a) Number of distinct articles handled. (b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters. (c) Includes newspapers and postal articles not included in letter mail. (d) Includes registered, cash on delivery and duty parcels. (e) Includes registered articles other than parcels. (f) Not comparable with previous years due to revised methods of measuring mail statistics. (g) Comparable only with previous year.

During 1971-72 the cost of the carriage of mails, as disclosed by the Profit and Loss Statement of the Postal Service, was as follows: road, \$15,177,691; railway, \$4,292,597; sea, \$842,257; air—internal, \$4,202,394; overseas, \$10,364,745; total, \$34,879,684.

**Money orders and postal orders**

The issue of money orders and postal orders is regulated by Sections 74-9 of the *Post and Telegraph Act* 1901-1971. The maximum amount for which a single money order payable within Australia may be obtained is \$200, but additional orders will be issued upon request when larger amounts are to be remitted. The maximum amount permitted to be sent by any one person to a person or persons outside Australia is \$50 a week. A postal order is not available for a sum larger than ten dollars. The following table shows the number and value of money orders and postal orders issued in Australia in each of the years 1966-67 to 1971-72 and the income therefrom which has accrued to the Post Office.

**MONEY ORDERS AND POSTAL ORDERS: TRANSACTIONS, AUSTRALIA  
1967-68 TO 1971-72**

Year	Money orders(a)			Postal orders		
	Issued		Total commission received	Issued		Fee
	Number	Value		Number	Value	
	'000	\$'000	\$'000	'000	\$'000	\$'000
1967-68 . . .	(b)11,373	438,668	2,544	(c)12,364	22,149	657
1968-69 . . .	9,672	209,868	2,637	13,525	27,262	772
1969-70 . . .	9,153	175,446	2,640	14,866	31,431	861
1970-71 . . .	7,353	161,119	3,031	(d)16,732	44,961	1,193
1971-72 . . .	5,677	143,167	2,808	17,289	55,784	1,779

(a) Money orders issued for payment in Australia and overseas. (b) Includes official money orders used in bringing to account telephone accounts and collections on War Service Homes repayments. (c) Postal orders for \$5, \$6, \$7 and \$8 were introduced in October 1967. Until then the highest denomination was \$4. (d) Postal orders for \$9 and \$10 were introduced in October 1970.

Of the total money orders issued in Australia during 1971-72, 5,201,581 valued at \$137,832,976 were payable in Australia, and 475,274 valued at \$5,333,612 were payable overseas. Of the total money orders paid in Australia during 1971-72, 5,492,570 (\$141,554,526) were issued in Australia, and 210,064 (\$4,737,940) were issued overseas.

Of the total postal orders paid in Australia during 1971-72 (17,115,826 valued at \$55,281,054), 12,956,407 (\$44,798,117) were paid in the State in which issued, and 4,159,419 (\$10,482,937) were paid in States other than those in which issued.

### Internal telecommunication services

A brief history of the development of telecommunications in Australia is shown on pages 378-82. Internal telecommunication operations now comprise telephone, telegraph, and telegraph exchange (telex) services.

#### Wire and pole routes

At 30 June 1972 there were 26,330,802 single wire miles of cable and 1,015,505 miles of aerial wire used for telecommunication purposes in Australia. The aerial wires are mounted on 103,135 miles of pole routes.

#### Coaxial cable and broadband relay systems

In recent years trunk telephone, telegraph and television channels have been increasingly provided by coaxial cable and radio relay systems. Broadband radio relay systems and coaxial cables are an alternative means of providing transmission facilities, each radio bearer being similar in carrying capacity to a coaxial tube. At 30 June 1972 there were 18,055 tube miles of coaxial cable and 50,187 bearer miles of radio relays in operation.

#### Telephone services in operation

Increasing use of the telephone by the community has resulted in a demand for additional telephone services. The volume of internal telephone traffic has consistently expanded, trunk line calls having the fastest rate of growth.

The following table shows the number of services in operation in each State at 30 June 1972 classified according to type of service, type of exchange to which connected, and location. Telephone services connected to exchanges located within fifteen miles of the Sydney and Melbourne and ten miles of the Brisbane, Adelaide, Perth, and Hobart General Post Offices are defined as being within a metropolitan area.

**Definitions of terms used in the following table**

*Ordinary exchange services* are services which provide direct access to the exchange system by means of exclusive use of an exchange line.

*Duplex services* provide for two subscribers sharing a single exchange line, and preserve individual calling, separate metering and secrecy conditions. Duplex services are counted as two services.

*Party line services* are other shared services involving any number of subscribers, and are counted as one service for one exchange line.

*Private branch exchange services* are services which provide for any number of extension lines to operate through a switchboard (either automatic or manual) into the exchange system. The number of exchange lines (as distinct from extension lines) is the relevant figure (a service with six exchange lines and fifty extension lines is shown as six services).

*Public telephones* are telephones installed in public thoroughfares and other approved places for the use of the public generally (leased company coin telephones and 'red phones' are not included).

**TELEPHONE SERVICES IN OPERATION: STATES, 30 JUNE 1972**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Type of service—							
Ordinary exchange services . . . . .	1,026,042	803,278	323,665	225,325	179,600	74,373	2,632,283
Duplex services . . . . .	444	..	18	2	150	12	626
Party line services . . . . .	3,584	1,280	2,677	1,097	975	78	9,691
Private branch exchange services . . . . .	125,226	84,472	30,078	32,168	27,393	4,906	304,243
Public telephones . . . . .	11,881	7,585	4,852	3,016	2,513	1,077	30,924
Connected to—							
Automatic exchanges . . . . .	1,094,702	848,152	314,068	241,877	197,387	75,763	2,771,949
Manual exchanges . . . . .	72,475	48,463	47,222	19,731	13,244	4,683	205,818
Located in—							
Metropolitan areas . . . . .	718,503	590,077	172,785	167,363	143,866	30,128	1,822,722
Country areas . . . . .	448,674	306,538	188,505	94,245	66,765	50,318	1,155,045
Total . . . . .	1,167,177	896,615	361,290	261,608	210,631	80,446	2,977,767

**TELEPHONE SERVICES IN OPERATION: AUSTRALIA, 1968 TO 1972**

Services connected to—	30 June—				
	1968	1969	1970	1971	1972
Metropolitan exchanges—					
Automatic . . . . .	1,456,179	1,548,479	1,663,849	1,754,872	1,822,722
Country exchanges—					
Automatic . . . . .	594,977	681,668	778,651	859,202	949,227
Manual . . . . .	307,681	281,084	261,168	242,936	205,818
All exchanges—					
Automatic . . . . .	2,051,156	2,230,147	2,442,500	2,614,074	2,771,949
Manual . . . . .	307,681	281,084	261,168	242,936	205,818
Total services . . . . .	2,358,837	2,511,231	2,703,668	2,857,010	2,977,767



## Telephone instruments

**TELEPHONE INSTRUMENTS IN SERVICE: STATES, 1968 TO 1972**  
(<sup>'000</sup>)

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1968 . . . . .	1,371	1,020	398	302	208	93	3,392
1969 . . . . .	1,444	1,080	423	321	232	98	3,599
1970 . . . . .	1,575	1,182	452	344	256	104	3,913
1971 . . . . .	1,683	1,240	475	360	285	114	4,157
1972 . . . . .	1,814	1,294	498	377	304	113	4,400
Number at 30 June 1972 per 100 population .	37.7	36.5	26.8	29.6	28.9	28.6	34.0

## Internal telephone traffic

**LOCAL AND TRUNK LINE TELEPHONE CALLS: AUSTRALIA**  
1967-68 TO 1971-72

Year	Effective paid local calls		Trunk line calls		Total calls '000
	Total '000	Per service number	Total '000	Per service number	
1967-68 . . . . .	2,295,000	999	151,400	66	2,446,400
1968-69 . . . . .	2,442,000	1,004	172,200	71	2,614,200
1969-70 . . . . .	2,662,000	1,021	198,400	76	2,860,400
1970-71 . . . . .	2,848,000	1,024	225,300	81	3,073,300
1971-72 . . . . .	2,996,000	1,024	248,700	85	3,244,700

Subscriber trunk dialling (S.T.D.) facilities were introduced during the year 1961-62 from Canberra to the Sydney network and from Warragul (Victoria) to Melbourne. At the end of June 1972 subscriber trunk dialling was in operation at 1,682 exchanges, connected to approximately 2,488,305 services.

## Internal telegraph traffic

Telegrams can be lodged at any post office, telephone office or from any public telephone equipped for multi-coin operation. In addition, telegrams can be despatched from any subscriber's telephone or telegraph exchange (telex) equipment. The number of telegrams of various types transmitted within the Commonwealth during the years 1967-68 to 1971-72 is set out below.

**INTERNAL TELEGRAPH TRAFFIC: AUSTRALIA, 1967-68 TO 1971-72**  
(<sup>'000</sup>)

Year	Ordinary (a)	Urgent	Press	Letter- grams	Meteoro- logical service	Service	Total telegrams
1967-68 . . . . .	18,723	440	68	38	1,060	719	21,047
1968-69 . . . . .	18,543	440	68	33	1,068	718	20,869
1969-70 . . . . .	18,217	454	63	32	1,040	754	20,560
1970-71 . . . . .	16,265	436	63	23	1,099	765	18,651
1971-72 . . . . .	15,401	397	51	20	1,085	781	17,735

(a) Includes radiograms.

**Telex network**

Particulars of the operations of the telex network, which are additional to the telegraph traffic shown above, are as follows:

**TELEX NETWORK SERVICES AND INTERNAL  
CALLS, AUSTRALIA, 1967-68 TO 1971-72**

<i>Year</i>	<i>Services at end of year</i>	<i>Internal calls during year</i>
1967-68 . . .	4,054	8,377,816
1968-69 . . .	5,067	9,977,018
1969-70 . . .	6,430	12,092,737
1970-71 . . .	7,988	14,246,157
1971-72 . . .	9,235	15,868,800

### Development of telecommunications in Australia

**Telegraphs**

The electric telegraph was first introduced into Australia for use by the public in the year 1854, when a line from Melbourne to Williamstown was opened. The first line in South Australia, from Adelaide to Port Adelaide, was opened in 1856, while the first line in New South Wales was brought into operation in 1858, when the line from Sydney to South Head, 6 miles in length, was opened. In Tasmania the first telegraph line was completed in 1857, while in the following year communication was established between Sydney, Melbourne, and Adelaide. The first lines to be constructed in Queensland were those between Brisbane and Ipswich, and Brisbane and Lytton, distances of 24 and 12 miles respectively, and in 1861 Brisbane was connected to Sydney by telegraph. In Western Australia the first telegraph constructed was from Perth to Fremantle, a distance of 12 miles, and was brought into use in 1869. In the same year the cable joining Tasmania with the mainland of Australia was completed, and in 1877 the intercapital link, Perth to Adelaide was established.

On 22 August 1872 the construction of the Overland Telegraph Line was completed. This line was the first telegraphic link to span Australia from coast to coast, stretching from Port Augusta in South Australia to Port Darwin in the Northern Territory, a distance of approximately 1,800 miles. The route of the telegraph line followed closely the path of the expeditions of John McDouall Stuart (1859-62), who had shown that there was a practicable route for an overland telegraph. The line joined the overseas cable terminating in Darwin, which was completed in November 1871, and enabled Australia to communicate with Europe by submarine cable by way of Singapore and Madras. For the first time in history Australia was in direct contact with the outside world.

Eleven repeater stations were established between Port Augusta and Port Darwin. The original Overland Telegraph Line consisted of a single galvanised-iron wire which for over 25 years carried the overseas telegraphic business of Australia. Increasing traffic necessitated the erection of a second line on the same poles as the first line in 1899. This time copper wire was used and as a result a relatively high-speed duplex circuit was provided. The Overland Telegraph Line was operated by the South Australian Government until 1901 when federation of the Australian colonies vested the responsibility for posts and telegraphs in the Commonwealth Government.

An article about the Overland Telegraph Line is contained in the South Australian Year Book No. 7, 1972, pages 526-31.

During the period from 1871 to 1891 great progress was made in telegraphic construction throughout Australia, with over 27,500 pole miles of line, exclusive of railway telegraph lines, being opened for use, making the total length of the line open at the end of 1891, 39,506 pole miles. In 1902 a submarine cable, touching only British territory on its way from Australia to Canada, provided an 'All Red' route, for a cable system between England and Australia. Between 1902 and 1923, further construction increased the length of telegraph line to 66,648 pole miles and by 1929 a further 26,589 pole miles had been constructed giving a total of 93,237 pole miles by the end of 1929.

Under the *Wireless and Telegraphy Act* 1905 the Commonwealth Postmaster-General was given exclusive control over establishing, erecting, maintaining and using stations and appliances for the purpose of transmitting and receiving messages by wireless telegraphy. The Act also empowered him to issue licences, inflict penalties, confiscate appliances unlawfully used, and take proceedings in courts of summary jurisdiction for offences under the Act.

In 1912 Sydney Radio, the first coastal radio station, commenced operation. In the same year radio telegraph services were commenced. The use of radio also enabled the economic establishment of an inland radio-telegraph system linking isolated settlements and homesteads with the ordinary land surface telegraph system.

By 1872 Australia had established an internal telegraph system based on Morse code and operated manually. In 1923 Morse Code was converted to machine operation on main telegraph routes.

In 1929 the telegraph system was extended to include the first picturegram service between Sydney and Melbourne. Further growth in the telegraph system was forestalled by the Great Depression, the number of telegram messages sent falling from 16 million in 1929–30 to 13 million in 1930–31. Prior to the 1939–45 War, Australians were at one time averaging more telegrams per head of population than in any other country in the world. However, following the war there was a large drop in usage. From a peak of nearly 30 million telegrams annually during the later war years (1942–45) and immediately after, the number fell and stabilized at about 20 million despite improvements in services and rapid population and economic growth. This was associated with an increased use of telephones, changing demands by major users for telegram transmission facilities and the increased use of private wire teleprinter services (originally introduced in 1933) which enabled users to hire direct lines on a 'permanent' basis and use their own teleprinters to send and receive a constant flow of telegraph messages.

In 1959, the Postmaster-General's Department introduced TRESS (Teleprinter Reperforator Switching System) and within the next three years it took over entirely from the Morse telegraph system. Whilst teleprinters had gradually been taking over from morse key and sound equipment in the busier post office telegraph offices, TRESS made possible the automatic transmission of telegrams through intermediate transit points, without manual handling, which greatly reduced transmission times.

The TELEX (Teleprinter Exchange) service was introduced for the first time in Australia in 1954 with 80 subscribers in Sydney and Melbourne. The system rapidly developed in other states with typical subscribers being motel organisations, banks, manufacturing companies, hotels and the news media. In 1972, there were more than 9,000 telex subscribers all over Australia.

In 1966 the Australian telex network was converted to automatic operation permitting subscribers to exchange calls direct with all other subscribers in Australia and to be charged on an actual time used basis similar to the Subscriber Trunk Dialing (S.T.D.) system in operation for long distance telephone calls. At the same time, this facility was extended to 20 of the 100 countries overseas with which the telex service was linked.

In the 1950s and 1960s there was growing demand for facsimile transmissions of photographic and other data and by 1966 newspaper printing could also be transmitted between capital cities by this method.

In 1969 the Postmaster-General's Department introduced its DATEL (Data Transmission) service to cope with growing demands on its telegraphic networks. Compared with the Morse code system by which one or two characters could be transmitted per second, data could now be transmitted at rates up to 4,500 characters per second by the use of coaxial cable or microwave transmission.

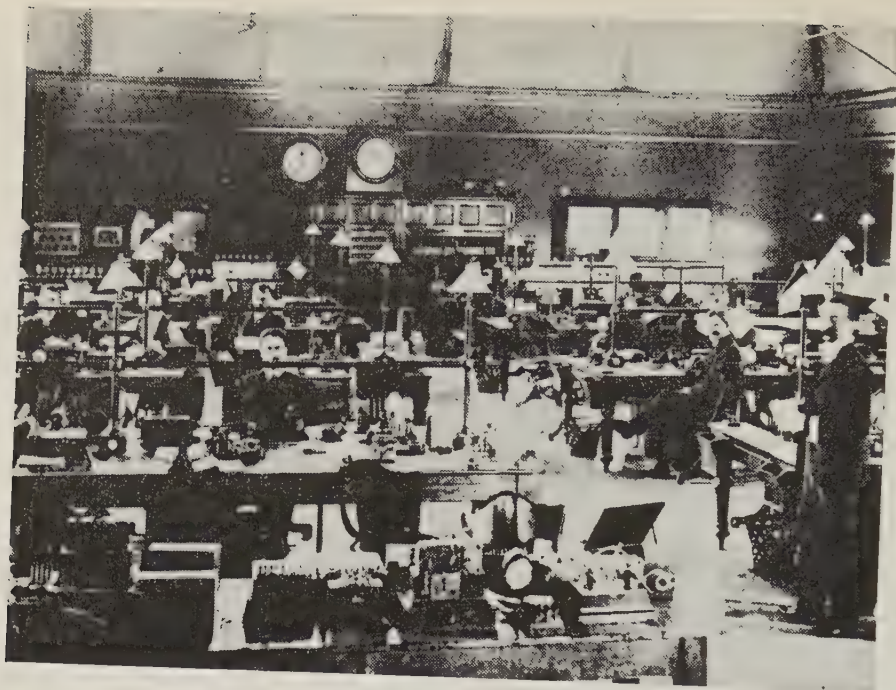
On private line services, the DATEL system was extended in January 1971, so that about 300 characters per second could be transmitted. This is in the medium range speeds. In June 1972, through the use of microwave transmissions, a special private line service operating at 4,500 characters per second, was opened to link a customer's computers in Sydney and Melbourne.

The growth and future potential of data transmission in Australia has been emphasized by the installation of 565 modems through the Commonwealth in the first 18 months of operation to June 1970. Modems (modulator/demodulator) translate signals, passed either by electric impulse or by radio waves, into a language that the receiving machine can reproduce. Thus a message sent from a telex with one language can be received by another telex with a different language through the use of modems. Any one modem can serve up to 200 transmission reception devices.

### Telephones

In 1878 two years after Alexander Graham Bell demonstrated the telephone in U.S.A. the first long-distance telephone call in Australia was conducted over a distance of 240 miles between Semaphore and Port Augusta, in South Australia. By 1880 exchanges were established as private businesses in Brisbane, Sydney and Melbourne, and in 1882 a Government-owned exchange was established in Sydney. Private exchanges were opened in Adelaide and Hobart in 1883, and in Perth in 1888. All private exchanges were eventually taken over by the colonial governments and operated by their respective Post and Telegraphs departments.





Telegraph Operating Room, G.P.O., Sydney, about 1902



The Central Manual Telephone Exchange, Lonsdale St., Melbourne, about 1908

*Photos by courtesy of the Postmaster-General's Department*

**PLATE 30**

On 1 March 1901, the six separate State Post and Telegraph departments were amalgamated and formed into the Commonwealth Postmaster-General's Department.

In 1902 the first interstate telephone trunk line service was opened—between Mt Gambier, South Australia and Nelson, Victoria and in 1907 the Sydney-Melbourne telephone trunk line service was completed. In 1912 the first automatic telephone exchange in Australia and the second only in the British Empire was opened in Geelong, Victoria.

In 1924 trunk-telephone operators in Victoria were able, for the first time, to dial some other distant exchanges direct. In 1926, two-way mobile radio telephone services were introduced. By 1929, the number of telephones connected reached the half million mark—and Australia, with an average of 7.93 telephones per 100 population had the sixth highest telephone density in the world.

The depression in the 1930s had a marked effect in reducing demand for communication services. In 1930–31, for the first time, cancellation of telephone services exceeded new connections and the number of instruments in service fell by 22,000. The volume of calls also declined, local calls falling by nearly 23 million from the preceding 1929–30 turnover of 420,600,000 and trunk line calls by over 5 million from 35,400,000. Nevertheless, there were many developments in telephone services in the 1930s. In 1930, the overseas radio-telephone service commenced between Australia and England. In 1933, the first Australian made handset telephone was introduced, and in 1936 the Tasmania–Mainland telephone service was opened through a submarine cable under Bass Strait. At the time, it was the longest submarine telephone communications cable in the world. By 1939, telephone connections had again reached the half million mark of 1929.

During the 1939–45 War the Postmaster-General's Department accepted responsibility for a great deal of specialised work on behalf of the Defence Forces, and this involved the diversion of large numbers of highly skilled technicians and other officers from their normal duties.

In the post-war years there was a dramatic increase in the number of telephone subscriber service connections. From 577,777 services connected in 1945 the number almost doubled to reach 1,152,930 in 1955, and almost doubled again to reach 2,010,124 in 1965. With this growth in demand came the problem of 'deferred applications', the installations which could not be met quickly or, in cases, within years. Deferred applications reached a peak of 128,000 in 1951 but declined progressively to about 13,000 in 1972. During the same period all figure numbering increasingly replaced the alpha-numeral system commonly in use.

Since 1945 the percentage of telephone subscriber services connected to automatic operation has been increasing. In 1945, just under 60 per cent of the 580,000 services were connected to automatic exchanges. The automation of the national telephone service gained impetus with the introduction of the Community Service Telephone Plan in May 1960, whereby the areas for many local call facilities were rearranged and extended and telephone calls which would previously have been short distance trunk calls became local calls. By 1972, services connected to automatic exchanges had reached 92 per cent in a total of 3 million services.

In 1951 the external circulation system was modified and direct communication was established between an increasing number of centres which were formerly sent through intermediate repeating centres. In 1953, the first 34-channel carrier system on trunk cable was introduced.

In 1956 the Postmaster-General's Department introduced direct trunk calling by subscribers in Australia—between Dandenong and Melbourne and St Mary's and Sydney—known as Subscribers Trunk Dialling (S.T.D.). By 1972, nearly 83 per cent or 2,488,000, of Australia's telephone subscriber's services had some measure of S.T.D. service and more than 57 per cent of all trunk calls were being dialled directly by the subscriber compared with less than 10 per cent in 1965. An added advantage to the S.T.D. caller, apart from speed and ease of operation, is that S.T.D. calls are charged on a metered basis for the actual time of the call, instead of the minimum 3 minute charge for trunk calls.

Until 1967, S.T.D. development in Australia had been limited to point to point operation, for example, Melbourne to Sydney. In 1967, however, the first automatic trunk switching centres were brought into operation in Sydney, Canberra, Newcastle, Geelong and Launceston. This enabled long distance calls to be automatically switched through without need for a direct line; for example, a subscriber in Launceston could now dial Newcastle direct without the need to go through any intermediate switching stations.

Other centres were progressively added to the network and by 1972, most areas in Australia could be dialled direct by the subscriber. The popularity of S.T.D. can be gauged by the fact that where the facility was available approximately 85 per cent of calls made in 1972 were dialled direct by callers.

Other recent advances in the telephone service include recorded information service, early morning and reminder call service, communication aids introduced to meet the needs of the partially



deaf, a highly sensitive transmitter to help telephone users with serious larynx problems, and an increase in the range of telephones available for customers' use. Also, private companies during the 1960s were licensed to install and operate, by financial agreement with the Post Office, public telephones in shops, banks and similar premises.

### Broadcasting and television

In 1923 the first radio broadcasting stations were established in Australia under the call signs 2FC and 2BL. Rapid development in broadcasting followed. In 1925, the Inland Wireless System began operating. In the same year, on 2 May, a radio broadcast in London was transmitted to radio listeners in Australia. In April 1929, the National Broadcasting Service was established, with the Postmaster-General's Department responsible for buildings, transmitter equipment and provision of program relay lines for its emerging radio networks systems. In 1932, the Australian Broadcasting Commission was constituted to administer the programs of the National Service. Since 1929, nearly 200 national and commercial, medium-frequency radio stations have been established throughout Australia. In addition the National Service operates the external, or international short-wave service created in 1940 and known as 'Radio-Australia'.

In 1950, the mobile radio-telephone service was first introduced by the Post Office in Australia. Today there are just over 120,000 mobile services authorised covering taxi services, ambulances and many other organisations.

In 1956, television was introduced into Australia with the Postmaster-General's Department becoming responsible for the provision and operation of the National Television Service transmitting stations and technical equipment for the purpose of television programs, and the issue of television viewers' licences and the policing of the provisions of the *Broadcasting and Television Act 1942-1956*. A Federal Government plan laid down a gradual expansion of T.V. services, both national and commercial throughout Australia for the following 10 years. While the commercial services have been set up and operated on a local studio and transmission basis the National Television Service has been established and operated on a more centralised basis, with direct relays of capital city programs to provincial and country stations. By the end of 1972 a total of 100 National Service and commercial T.V. stations were providing programs to an area containing 97 per cent of the population.

In 1972 a complementary group of 97 translator stations were in operation with more than one third of these having been established for the National Television Service. The function of the translator stations is to 'repeat' or reflect transmissions from the nearest master transmitter station to more geographically remote populated locations.

### Broadband systems

Broadband systems of either microwave radio or coaxial cable are operated on a broadband of radio frequencies and can provide thousands of trunk circuits for all manner of telecommunication transmissions including T.V. program relays. Compared with the first 34-channel carrier, some of the present broadband systems now have capacities of over 300 channels. In 1959 the first broadband trunk system was installed—a microwave radio system between Melbourne and Bendigo.

In 1962, a coaxial cable system was brought into operation between Melbourne and Sydney. Since then broadband systems have spread extensively over Australia so that by July 1972, inter-linked coaxial cable and microwave trunk systems had linked the major centres of population, and the route distance of the system was over 10,000 miles.

In 1972 new equipment was introduced on trunk routes to increase the capacity of a pair of coaxial cable tubes to 2,700 telephone circuits or 1,200 telephone circuits and a T.V. channel in each direction. The Postmaster-General's Department's broadband systems have also done much to make the spread of S.T.D. possible as they have the necessary large circuits capacity to cope with its peak demands. With S.T.D. the traffic demand cannot be regulated as it can by manual operation and the trunk system must be able to cater for hundreds of subscribers in Sydney and Melbourne, for example, making calls in either direction virtually at the same instant.

The broadband network is linked, in turn, with the COMPAC and SEACOM submarine cables which are the main trunk lines for all Australia's overseas telecommunications traffic. In 1967, a microwave link was established from Sydney to feed traffic through the Overseas Telecommunication Commission's earth station at Moree. This station handles incoming and outgoing traffic including television transmissions/receptions through the medium of the INTELSAT satellite system.

The use of INTELSAT III in 1969 to provide 24 circuits for trunk calling to and from Western Australia, pending completion of the East-West microwave link, was probably the first successful use by any country of satellites for domestic trans-continental trunk calling.



## TELEGRAPH PLANT, AUSTRALIA, 1872 TO 1971-72

Year	Cable wire	Aerial wire	Total	Pole routes	Coaxial cable	Conduits	Broadband radio relay systems
	miles	miles	miles	miles	tube-miles	duct miles	miles
1872 . . .	n.a.	(a)17,102	n.a.	(a)11,000	..	n.a.	..
1882 . . .	n.a.	(a)41,750	n.a.	25,046	..	n.a.	..
1892 . . .	n.a.	(a)70,456	n.a.	40,017	..	n.a.	..
1902 . . .	(b)16,085	(a)114,822	130,907	41,992	..	50	..
1912 . . .	(a)258,795	(a)101,218	360,013	(a)52,000	..	1,072	..
1921-22 . .	682,544	386,165	1,068,709	62,489	..	2,926	..
1931-32 . .	1,784,388	811,733	2,596,121	100,507	..	6,217	..
1941-42 . .	2,584,014	861,611	3,445,625	97,585	..	13,828	..
1951-52 . .	4,421,204	1,112,392	5,533,596	108,797	..	21,187	..
1961-62 . .	10,330,679	1,381,925	11,712,604	122,308	3,095	(c)15,586	1,704
1971-72 . .	26,330,802	1,015,505	27,346,307	103,135	18,055	(c)40,389	50,187

(a) Partly estimated. (b) Excludes details of submarine cable, morse cable and junction circuits. (c) After 1953-54, "conduits" cover only ducts and conduits of 2 inches and over internal diameter—prior to that those of diameters under 2 inches were also included.

NOTE. Although there have been several minor changes in the definition of items covered under each column heading, comparability over the last fifty years is not seriously affected. Prior to 1914, the reliability of "comparable" items is doubtful and for this reason, the figures above are more restricted in coverage before 1914.

TELEPHONE PLANT, AUSTRALIA, 1872 TO 1971-72  
(number)

Year	Exchanges in service			Services in operation			
	Automatic	Manual	Total	Automatic (a)	Manual (a)	Total (a)	Instruments in service
1872 . . .	..	..	..	..	..	..	..
1882 . . .	..	(b)10	(b)10	..	n.a.	n.a.	n.a.
1892 . . .	..	(b)40	(b)40	..	(b)7,000	(b)7,000	n.a.
1902 . . .	..	123	123	..	27,713	27,713	35,863
1912 . . .	1	1,031	1,032	1,100	94,865	95,965	117,479
1921-22 . .	20	2,683	2,703	35,000	160,886	195,886	258,881
1931-32 . .	66	6,003	6,069	141,575	221,997	363,572	484,626
1941-42 . .	265	6,118	6,383	307,263	223,812	531,075	738,666
1951-52 . .	656	6,334	6,990	600,536	338,433	938,789	1,300,790
1961-62 . .	1,949	5,107	7,056	1,353,347	365,222	1,718,569	2,382,478
1971-72 . .	3,443	2,536	5,979	2,771,949	205,818	2,977,767	4,399,782

(a) Described as "lines in service" as distinct from "services in operation" though the terms appear to be interchangeable up to 1941-42. From then on, the term "services in operation" only has been used. (b) Partly estimated.

## INTERNAL TELEGRAM AND TELEX TRAFFIC, AUSTRALIA, 1872 TO 1971-72

Year	Telegrams		Telex	
	Number of offices(a)	Total	Services at end of year	Internal calls during year
		'000		'000
1872 . . .	(b)380	(b)1,200	..	..
1882 . . .	(b)1,140	(b)5,000	..	..
1892 . . .	(b)2,360	(b)8,000	..	..
1902 . . .	2,589	8,010	..	..
1912 . . .	4,180	13,343	..	..
1921-22 . .	6,641	15,796	..	..
1931-32 . .	9,225	12,680	..	..
1941-42 . .	9,479	23,662	..	..
1951-52 . .	9,830	27,080	..	..
1961-62 . .	9,329	18,739	1,215	733
1971-72 . .	(b)7,200	17,735	9,235	15,869

(a) Includes Railways Departments' telegraph offices. (b) Partly estimated.

## INTERNAL TELEPHONE TRAFFIC, AUSTRALIA, 1872 TO 1971-72

Year	Effective paid local calls		Trunk line calls		Total calls
	Total	Per service number	Total	Per service number	
	'000		'000		'000
1872 . . . . .	..	..	..	..	..
1882 . . . . .	n.a.	n.a.	n.a.	n.a.	n.a.
1892 . . . . .	n.a.	n.a.	n.a.	n.a.	7,500
1902 . . . . .	n.a.	n.a.	n.a.	n.a.	n.a.
1912 . . . . .	n.a.	n.a.	n.a.	n.a.	111,300
1921-22 . . . . .	220,600	1,126	14,000	71	234,600
1931-32 . . . . .	368,600	1,014	28,900	80	397,500
1941-42 . . . . .	619,000	1,166	45,300	85	664,300
1951-52 . . . . .	967,900	1,031	69,400	74	1,037,300
1961-62 . . . . .	1,650,000	960	76,500	45	1,726,500
1971-72 . . . . .	2,996,000	1,006	248,700	84	3,244,700

## INTERNATIONAL TELEGRAM TRAFFIC, AUSTRALIA, 1872 TO 1971-72

Year	Telegrams			
	Outgoing	Outgoing	Incoming	Incoming
	'000	'000 paid words	'000	'000 paid words
1872 . . . . .	1	n.a.	1	n.a.
1882 . . . . .	19	n.a.	20	n.a.
1892 . . . . .	44	n.a.	44	n.a.
1902 . . . . .	161	n.a.	127	n.a.
1912 . . . . .	298	3,607	289	3,752
1921-22 . . . . .	500	8,163	499	8,200
1931-32 . . . . .	611	11,702	564	10,769
1941-42 . . . . .	1,329	35,408	1,146	34,213
1951-52 . . . . .	1,329	37,496	1,357	42,159
1961-62 . . . . .	1,435	35,502	1,416	41,394
1971-72(a) . . . . .	2,489	64,862	2,353	58,113

(a) Year ended 31 March 1972.

## INTERNATIONAL TELEPHONE AND TELEX TRAFFIC, AUSTRALIA, 1872 TO 1971-72

Year	Telephone				Telex			
	Outgoing calls		Incoming calls		Outgoing calls		Incoming calls	
	'000	'000 paid minutes	'000	'000 paid minutes	'000	'000 paid minutes	'000	'000 paid minutes
1872 . . . . .	..	..	..	..	..	..	..	..
1882 . . . . .	..	..	..	..	..	..	..	..
1892 . . . . .	..	..	..	..	..	..	..	..
1902 . . . . .	..	..	..	..	..	..	..	..
1912 . . . . .	..	..	..	..	..	..	..	..
1921-22 . . . . .	..	..	..	..	..	..	..	..
1931-32 . . . . .	1	n.a.	..	n.a.	..	..	..	..
1941-42 . . . . .	n.a.	n.a.	n.a.	n.a.	..	..	..	..
1951-52 . . . . .	21	124	19	114	..	..	..	..
1961-62 . . . . .	66	319	69	366	50	342	60	371
1971-72(a) . . . . .	1,072	7,206	n.a.	7,090	1,491	4,238	1,352	4,108

(a) Year ended 31 March 1973.

## Overseas telecommunication services

The Overseas Telecommunications Commission (Australia) (O.T.C.) is the authority responsible for the establishment, maintenance and operation of telecommunication services between Australia and other countries, with ships at sea and to and between Australia's external Territories.

The Commission was established under the *Overseas Telecommunications Act 1946*. This Act implemented, in Australia, a recommendation of the 1945 Commonwealth Telecommunications Conference for national ownership of the external telecommunications services of the British Commonwealth countries concerned. (Details of overseas communication systems operating in Australia prior to 1946 and developments leading to the establishment of the Commission were published in Year Book No. 37, pages 220-4.)

With most other Commonwealth countries, the Commission is a member of the Commonwealth Telecommunications Organisation, the purpose of which is to promote the efficient exploitation and development of the Commonwealth external telecommunications system; it is a three-tier structure comprising the Commonwealth Conference on Telecommunications, the Commonwealth Telecommunications Council and the Commonwealth Telecommunications Bureau. The Commonwealth Telecommunications Council is the continuing management body of the Organisation with the role of promoting the purpose of the Organisation and carrying out the policies agreed by Governments. The Commonwealth Telecommunications Bureau is the Secretariat for the Organisation and functions under the control and direction of the Council.

The 1972 Commonwealth Telecommunications Conference reviewed the working of the Commonwealth Telecommunications Organisation in the light of experience and recommended new collaborative financial arrangements governing the use of the Commonwealth telecommunications systems. With the adoption of the recommendations of the 1972 Conference by member Governments, the Commonwealth Telecommunications Organisation Financial Agreement 1969 was replaced on 1 April 1973 by the Commonwealth Telecommunications Organisation Financial Agreement 1973.

In association with the Post Office within Australia and with communication carriers in other Commonwealth and foreign countries the Commission provides public message telegram, telephone, telex, phototelegram, leased circuit and switched data services to most countries and places throughout the world. International television programs are provided by means of satellite communication facilities with countries operating earth stations, while the switched data service is available to a number of countries.

To meet Australia's increasing demand for overseas communication channels, and because of limitations to performance and capacity inherent in telegraph cables and high frequency radio systems, the Commission, in partnership with the overseas telecommunications authorities of Britain, Canada and New Zealand, installed a large capacity telephone cable across the Pacific Ocean, connecting Australia, New Zealand and Canada via Suva and Honolulu. The cable (COMPAC) was opened in December 1963 and forms part of a British Commonwealth large capacity cable scheme, in which a complementary cable between Britain and Canada (CANTAT) was officially opened in December 1961. The two cable connections are linked across Canada by a microwave system. The Commonwealth cable system feeds into the United States of America network at Hawaii and into the European network at London.

The South-East Asia cable project (SEACOM), extending the large capacity telephone cable system from Sydney to Singapore and Kuala Lumpur via Cairns, Madang, Guam, Hong Kong, and Kota Kinabalu, was opened for service on 30 March 1967.

The Commonwealth Cable Management Committee, comprising representatives of Britain, Canada, Australia, New Zealand, Malaysia and Singapore, administers COMPAC and SEACOM.

In August 1964, Australia became a foundation member of the International Satellite Organisation (INTELSAT), a partnership of nations concerned in establishing a global communications, satellite system. Australia has an ownership share of 2.7 per cent making it the ninth largest contributor among the 82 INTELSAT member countries, and through the O.T.C. Australia is represented on the INTELSAT board of governors, which is the management board of INTELSAT.

The Interim Agreements under which INTELSAT has operated in the period since 1964 were superseded in February 1973 by permanent arrangements, which are embodied in two inter-related Agreements. The first, an inter-governmental agreement signed by the Australian Government, outlines the principles and objectives of the organisation and defines the basic organisational arrangements. The second, the Operating Agreement, signed by the O.T.C. as the designated Australian telecommunications entity, provides the basis for the operation and management of the INTELSAT system.



The INTELSAT system comprises satellites located over the Atlantic, Pacific and Indian oceans. At the beginning of 1973 these satellites were providing the equivalent of 3,763 two-way telephone circuits and on demand television service between 81 earth stations located in 49 countries.

In March, 1968, a satellite earth station at Moree, New South Wales, owned and operated by the Commission, commenced commercial communications, including a capability for television transmission/reception. This station, which operates to the Pacific Ocean INTELSAT satellite positioned in a stationary orbit 22,300 miles above the equator, was the first in Australia constructed as a 'standard' station of the INTELSAT network, and carries direct circuits between Australia and other countries in the Pacific region. The link with Japan, the first by satellite from Australia to an Asian country, was established for commercial operation on 14 March, 1969.

The completion of the new standard earth stations at Carnarvon (Western Australia) and Ceduna (South Australia) in 1969 and a significant expansion of facilities at the earth station at Moree (N.S.W.) provided increased telecommunication services via satellite.

The original non-standard station in Carnarvon (opened in 1967) is now used solely for telemetry, tracking and command (T.T. & C.) functions under contract with the INTELSAT organisation. The T.T. & C. function provides for four such stations to be spaced around the world so that any INTELSAT satellite can be viewed and controlled no matter where it may be. These stations keep a continuous check of the position of each satellite and its functioning by means of signals transmitted by the satellite. When required, signals are transmitted to a satellite to control the direction of its antenna and to change its orbital position. During launches, these stations transmit the commands which fire the satellite motor to place it in final orbit. The Interim Communications Satellite Committee selected the Carnarvon station for this purpose after calling competitive tenders from earth station owners in the coverage zone of the Indian Ocean and Pacific Ocean satellites.

The second Carnarvon station, operating via the Pacific Ocean INTELSAT satellite, provides a link for the National Aeronautics and Space Administration (NASA) between its Carnarvon space tracking stations and the United States. The earth station at Ceduna, operated through the Indian Ocean INTELSAT satellite, offers services to earth stations in the United Kingdom, Indonesia, India and other countries in the coverage area of the Indian Ocean satellite.

#### International telecommunication traffic

Particulars of the volume of international telegraph services, originating and terminating in Australia, during the years ended 31 March 1971 and 1972 are shown in the following table.

#### INTERNATIONAL TELEGRAPH SERVICES: AUSTRALIA, YEARS ENDED 31 MARCH 1971 AND 1972

('000 words)

Class of traffic	Words transmitted					
	From Australia		To Australia		Total	
	1970-71	1971-72	1970-71	1971-72	1970-71	1971-72
Letter . . .	30,205	30,004	26,553	24,684	56,758	54,688
Ordinary . . .	28,841	27,528	26,851	25,344	55,692	52,872
Press . . .	3,786	3,004	4,315	2,687	8,102	5,691
Greetings . . .	1,607	1,689	1,731	1,919	3,338	3,607
Urgent . . .	1,891	1,907	1,540	1,485	3,431	3,392
Other . . .	574	731	1,697	1,995	2,271	2,726
<b>Total . . .</b>	<b>66,905</b>	<b>64,862</b>	<b>62,687</b>	<b>58,113</b>	<b>129,592</b>	<b>122,976</b>

The following table shows particulars of overseas telecommunication traffic other than telegraphic between Australia and overseas countries for the years ended 31 March 1971 and 1972.

**INTERNATIONAL TELECOMMUNICATION SERVICES OTHER THAN TELEGRAPHIC  
SERVICES: AUSTRALIA, YEARS ENDED 31 MARCH 1971 AND 1972**

Service	Transmissions					
	From Australia		To Australia		Total	
	1970-71	1971-72	1970-71	1971-72	1970-71	1971-72
Telephone . . . paid minutes	5,754,134	7,205,822	6,369,815	7,089,960	12,123,949	14,295,782
Telex . . . paid minutes	3,608,420	4,238,247	3,301,077	4,108,174	6,909,497	8,346,421
Television programs . . paid minutes	1,952	2,058	2,580	1,809	4,532	3,867
Phototelegrams . . . pictures	1,759	1,020	2,760	1,816	4,519	2,836

### Coastal stations

The Overseas Telecommunications Commission operates fourteen coastal radio stations at points around the Australian coast, three on the Papua New Guinea coast and one at Norfolk Island. During the year ended 31 March 1972 the coastal radio service handled 6,345,837 paid words to ships and 4,212,574 words from ships. Ship calls over the radiotelephone service extended over 143,687 paid minutes.

### Radiocommunication stations authorised

At 30 June 1972 there were 165,063 civil radiocommunication stations authorised for operation in the Commonwealth and its Territories. Of these, 6,368 were stations established at fixed locations, 13,809 were land stations which were established at fixed locations for communication with mobile stations, 25 space and broadcasting stations, 138,339 were mobile stations and 6,522 amateur stations. Particulars of broadcasting stations and broadcast listeners' licences are shown on pages 388 and 390 respectively.

## BROADCASTING AND TELEVISION

Broadcasting and television services in Australia operate under the *Broadcasting and Television Act 1942-1972* and comprise the National Broadcasting Service, the National Television Service, the Commercial Broadcasting Service, and the Commercial Television Service. General control of these services is a function of the Australian Broadcasting Control Board. Licence fees for commercial broadcasting and television stations are payable under the *Broadcasting Stations Licence Fees Act 1964-1966* and the *Television Stations Licence Fees Act 1964-1966* respectively.

Particulars of the composition, functions and responsibilities of the Australian Broadcasting Control Board are shown in Year Book No. 51, pages 594-5. The functions of the Board as shown therein were subsequently amended by repealing the Board's power to regulate the establishment and operation of networks. Pursuant to the *Broadcasting and Television Act 1942-1972*, the Australian Broadcasting Commission now consists of nine members, one of whom shall be a woman.

### Broadcasting services

#### The National Broadcasting Service

In sound broadcasting the programs of the National Broadcasting Service are provided by the Australian Broadcasting Commission through transmitters operated by the Postmaster-General's Department.

*Technical facilities.* At 30 June 1972 the National Broadcasting Service comprised eighty-one transmitting stations, of which seventy-five were medium frequency and six high frequency.

The medium-frequency transmitters operate in the broadcast band 530 to 1,590 kilohertz. The high-frequency stations, using frequencies within the band of three to thirty megahertz, provide services to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and northern and central Queensland.

Many of the programs provided by country stations are relayed from the capital cities, high-quality program transmission lines being used for the purpose. A number of program channels are utilised to link national broadcasting stations in the capital cities of Australia, and, when necessary, this system is extended to connect both the national and commercial broadcasting stations.

At 30 June 1972 sixty-three of the Australian medium-frequency stations were situated outside the six State capital cities.

*Program facilities.* The programs of the Australian Broadcasting Commission cover a wide range of activities. The proportion of broadcasting time allocated to the various types of program during 1971-72 was as follows: classical music, 24.6 per cent; entertainment, 31.4 per cent; news, 9.0 per cent; sporting, 5.5 per cent; light music, 1.7 per cent; spoken word, 6.9 per cent; drama and features, 4.3 per cent; education, 3.2 per cent; Parliament, 4.7 per cent; religious, 2.8 per cent; young people's programs, 1.4 per cent; rural, 2.0 per cent; and presentation, 1.8 per cent. Further particulars of the operations of the Australian Broadcasting Commission in respect of music, drama and features, youth education, talks, rural broadcasts, news, and other activities are shown in Year Book No. 51, pages 596-7.

### The Commercial Broadcasting Service

Commercial broadcasting stations are operated under licences granted and renewed by the Postmaster-General after taking into consideration any recommendations which have been made by the Broadcasting Control Board. The initial period of a licence is five years and renewals are granted for a period of one year. The fee payable for a licence is \$50 on the grant of the licence, and thereafter \$50 a year plus an amount ascertained by applying the following rates to 'gross earnings', within the meaning of the *Broadcasting Stations Licence Fees Act 1964-1966*, during the preceding financial year—1 per cent up to \$1,000,000; 2 per cent \$1,000,001 to \$2,000,000; 3 per cent \$2,000,001 to \$4,000,000; and 4 per cent over \$4,000,000.

### Overseas Broadcasting Service

There are seven high-frequency stations at Shepparton and two at Lyndhurst, Victoria, and three repeater stations at Darwin, Northern Territory, which provide the overseas service known as 'Radio Australia'. As in the case of the National Broadcasting Service, these stations are maintained and operated by the Postmaster-General's Department, and their programs are arranged by the A.B.C. The programs, which give news and information about Australia presented objectively, as well as entertainment, are directed mainly to South-East Asia and the Pacific. The overseas audience has grown very substantially in recent years, as evidenced by a large and increasing number of letters from listeners abroad.

### Broadcasting stations

#### BROADCASTING STATIONS: STATES AND TERRITORIES, 30 JUNE 1972

Type of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
National—									
Medium frequency .	19	5	17	10	14	4	4	2	75
High frequency .	1	2	2	..	1	..	..	..	6
Overseas (high frequency) . .	..	9	..	..	..	..	3	..	12
Commercial (medium frequency) . .	39	20	26	8	14	8	2	1	118
Total . .	59	36	45	18	29	12	9	3	211

Tables showing the call sign, location, frequency, and aerial power of national and commercial broadcasting stations in operation at 30 June 1971 are shown in *Transport and Communication*, Bulletin No. 62.



## Television services

### The National Television Service

The National Television Service is provided by the Australian Broadcasting Commission through transmitters operated by the Postmaster-General's Department. The first national station (ABN Sydney) commenced regular transmission on 5 November 1956. At 30 June 1972 fifty-two stations were operating, excluding thirty-eight translator stations.

The television programs provided by the Australian Broadcasting Commission cover a wide range of activities. The proportion of television time allocated among the A.B.C.'s various departments to 30 June 1972 was as follows: drama, 23.7 per cent; public interest, 12.0 per cent; sporting 10.5 per cent; news, 5.9 per cent; variety and acts, 7.2 per cent; education, 27.4 per cent; musical performances, 0.4 per cent; religious, 1.7 per cent; rural, 1.0 per cent; special arts and aesthetics, 0.5 per cent; presentation, 6.0 per cent. The average weekly transmission time for the fifty-two national television transmitters was eighty-five hours during the year ended 30 June 1972.

### The Commercial Television Service

Commercial television stations are operated under licences granted and renewed by the Postmaster-General. The first commercial station (TCN Sydney) commenced regular transmission on 16 September 1956. At 30 June 1972 forty-eight television stations were operating.

The initial grant of a licence is for a period of five years and thereafter the licence is renewable annually. The fee payable is \$200 for the first year and thereafter \$200 a year plus an amount ascertained by applying the following rates to 'gross earnings', within the meaning of the *Television Stations Licence Fees Act 1964-1966*, during the preceding financial year—1 per cent up to \$1,000,000; 2 per cent \$1,000,001 to \$2,000,000; 3 per cent \$2,000,001 to \$4,000,000; and 4 per cent over \$4,000,000.

### Colour television

The Government has announced that colour television will be introduced into Australia from 1 March 1975.

### Television stations

During the year ended 30 June 1972, four new national television stations commenced regular transmissions, namely ABMQ Channel 9, Mary Kathleen in Queensland, ABCNW Channel 7, Carnarvon in Western Australia, ABKT Channel 11, King Island in Tasmania and ABD Channel 6, Darwin in Northern Territory. Two new commercial television stations commenced regular transmission, ITQ Channel 8, Mt Isa in Queensland and NTD Channel 8, Darwin in the Northern Territory. The following table shows the number of television stations in operation at 30 June 1972.

TELEVISION STATIONS: STATES AND TERRITORIES  
30 JUNE 1972

Type of station and location	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
National—									
Metropolitan . . .	1	1	1	1	1	1	1	1	8
Country . . . . .	12	7	13	3	7	2	..	..	44
<i>Total, National . .</i>	<i>13</i>	<i>8</i>	<i>14</i>	<i>4</i>	<i>8</i>	<i>3</i>	<i>1</i>	<i>1</i>	<i>52</i>
Commercial—									
Metropolitan . . .	3	3	3	3	2	1	1	1	17
Country . . . . .	11	6	8	2	3	1	..	..	31
<i>Total, Commercial.</i>	<i>14</i>	<i>9</i>	<i>11</i>	<i>5</i>	<i>5</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>48</i>
<i>All stations . . . .</i>	<i>27</i>	<i>17</i>	<i>25</i>	<i>9</i>	<i>13</i>	<i>5</i>	<i>2</i>	<i>2</i>	<i>100</i>

Tables showing the call sign, location, frequencies, polarisation, aerial power, and weekly hours of transmission of National and Commercial television stations in operation at 30 June 1971 are shown in *Transport and Communication Bulletin*, No. 62.

### Broadcast listeners' and television viewers' licences

Broadcast listeners', television viewers', and combined receiving licences are issued at post offices in accordance with the provisions of the *Broadcasting and Television Act 1942-1972*, which stipulates that, except as prescribed, a person shall not use, maintain or have in his possession a broadcast or television receiver unless there is in force a licence which applies to that receiver. A broadcast listener's licence or a television viewer's licence, whichever is appropriate, authorises the operation of any broadcast receiver or any television receiver, which is: (a) in the possession of the holder of a licence, or of a member of his family, at the address specified in the licence and is ordinarily kept at that address; (b) installed in a vehicle which is ordinarily in the possession of that holder, or a member of his family, and is ordinarily kept at that address when not in use. A person who has both broadcast and television receivers at the one address may take out a combined receiving licence, provision for which was introduced by legislation effective from 1 April 1965.

A licence may be granted free of charge to a blind person over 16 years of age or to a person or authority conducting a school, and at a concession to certain classes of pensioners. Receivers provided for the use of inmates of an approved institution (including a hospital) are covered by an appropriate licence held by the institution. Persons residing in Zone 2 may also be granted a broadcast listener's licence at a reduced rate. Zone 1 is the area within 250 miles of specified broadcasting stations and Zone 2 is the remainder of Australia.

Each broadcast or television receiver let out on hire (except under a hire purchase agreement) must be covered by a hirer's licence held by the person or firm from whom the receiver is hired. The keeper of a lodging-house (which includes a hotel, motel, boarding-house, or any other premises where lodging or sleeping accommodation is provided for reward) must take out a lodging-house licence for each broadcast or television receiver provided by the proprietor in any room or part of the lodging-house occupied or available for occupation by lodgers.

The fees payable for the various classes of licence from 1 October 1972 are as follows.

#### BROADCAST LISTENERS' AND TELEVISION VIEWERS' LICENCES RATES

Licence		Ordinary rate	Pensioner rate
		\$	\$
Broadcast listener's licence and hirer's licence for a broadcast receiver . . . . .	Zone 1	8.00	1.00
	Zone 2	4.25	0.70
Lodging-house licence for a broadcast receiver . . . . .	Zone 1	8.00	..
	Zone 2	4.25	..
Television viewer's licence and hirer's licence for a television receiver . . . . .		19.00	3.00
Lodging house licence for a television receiver . . . . .		19.00	..
Combined receiving licence . . . . .		26.50	4.00

#### Numbers of broadcast listeners' and television viewers' licences

##### BROADCAST LISTENERS' LICENCES IN FORCE(a): STATES, 1968 TO 1972

30 June—	N.S.W.(b)	Vic.	Qld	S.A.(c)	W.A.	Tas.	Aust.
1968 . . . . .	934,877	724,711	371,637	290,051	181,356	77,228	2,579,860
1969 . . . . .	952,634	728,647	382,869	297,877	189,633	78,552	2,630,212
1970 . . . . .	960,223	747,508	384,951	302,519	196,679	78,513	2,670,393
1971 . . . . .	959,036	754,762	394,669	310,485	200,570	79,417	2,698,939
1972 . . . . .	996,822	758,042	405,181	315,612	205,230	77,096	2,757,983

(a) Includes short-term hirers' licences and combined broadcast listeners' and television viewers' licences. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

## TELEVISION VIEWERS' LICENCES IN FORCE(a): STATES, 1968 TO 1972

30 June—	N.S.W.(b)	Vic.	Qld	S.A.(c)	W.A.	Tas.	Aust.
1968 . . .	948,153	726,518	335,913	268,595	165,632	74,581	2,519,392
1969 . . .	993,145	747,080	367,289	280,420	183,307	78,216	2,649,457
1970 . . .	1,031,739	782,819	372,609	292,359	197,692	80,756	2,757,974
1971 . . .	1,042,724	806,077	399,947	303,252	209,882	83,286	2,845,168
1972 . . .	1,088,648	811,573	418,688	318,357	218,783	82,609	2,938,658

(a) Includes short-term hirers' licences and combined broadcast listeners' and television viewers' licences. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

The numbers of combined receiving licences included in both of the foregoing tables as at 30 June 1972 are: New South Wales, 891,832; Victoria, 699,652; Queensland, 335,199; South Australia 248,820; Western Australia, 174,798; Tasmania, 69,613; Australia, 2,419,914.

Television hirers' licences (including short term) (included above) at 30 June 1972 were: New South Wales, 104,704; Victoria, 38,845; Queensland, 41,956; South Australia, 49,553; Western Australia, 29,655; Tasmania, 6,411; Australia, 271,124.

## Revenue received from broadcast and television licence fees

The following table shows the revenue received from broadcast listeners' licence fees, television viewers' licence fees and from fees for combined licences during the years 1967-68 to 1971-72.

REVENUE RECEIVED FROM BROADCAST AND TELEVISION LICENCE FEES  
STATES, 1967-68 TO 1971-72  
(\$'000)

Year	N.S.W.(a)	Vic.	Qld	S.A.(b)	W.A.	Tas.	Aust.
1967-68 . . .	14,554	11,265	5,321	4,219	2,666	1,157	39,182
1968-69 . . .	16,700	12,747	6,306	4,930	3,127	1,314	45,125
1969-70 . . .	17,782	13,795	6,694	5,238	3,483	1,397	48,389
1970-71 . . .	17,912	14,023	6,921	5,586	3,689	1,429	49,562
1971-72 . . .	22,445	17,165	8,807	7,057	6,642	1,670	61,785

(a) Includes Australian Capital Territory. (b) Includes Northern Territory.

## TRAVEL

An article outlining the history and growth of travel and the structure of tourist organisations in Australia, prepared by the Australian National Travel Association, appeared in Year Book No. 52, pages 1158-84. The following pages contain statistics of travel to and from Australia, together with some descriptive matter. Current statistics on overseas travel are published in monthly, quarterly and annual mimeographed statements *Overseas Arrivals and Departures*.

## Overseas travel

Statistics about travellers to and from Australia are classified in the first instance by the actual or intended length of stay in Australia or in a country abroad; this classification distinguishes between permanent and temporary movement.

Statistics of permanent arrivals (immigrants) and permanent departures (emigrants) are shown in Chapter 7—Population.

## Traveller statistics (overseas visitors and Australian residents)

Statistics of temporary arrivals and departures which are in the nature of travel statistics are included in this chapter. They comprise two main categories.

- (i) *Short-term.* Those who intend to stay or have stayed in Australia (overseas visitors) or in a country overseas (Australian residents) for less than a year.
- (ii) *Long-term.* Those who intend to stay or have stayed in Australia (overseas visitors) or in a country overseas (Australian residents) for a year or more, but not permanently.



*Short-term* movement includes Australian troops, regardless of their length of stay abroad, and Australian residents who may be away for more than a year but whose actual or intended stay in any one country is less than a year. It excludes persons who arrive in and depart from Australia on the same ship's voyage or on the same flight (variously called direct transit or 'through' passengers) or who change flights without leaving the airport's transit area, passengers on pleasure cruises commencing and finishing in Australia (see page 397), and all crew. However, it includes persons who pass through the Customs barrier and declare the purpose of their visit to Australia to be 'in transit'. Short-term visitors are more numerous than long-term visitors and have come to be regarded as 'tourists' by many users of the statistics.

During the period October 1967 to December 1971, 276,885 United States troops came to Australia on rest and recreation leave. The last of them completed their leave in January 1972. For statistical purposes they were classified as short-term visitors travelling by air for holiday purposes and their country of residence and country of embarkation or disembarkation were shown as 'Asia—other'.

### TRAVELLER STATISTICS—SUMMARY, AUSTRALIA 1968 TO 1972

Year	Overseas Visitors				Australian Residents			
	Short-term		Long-term		Short-term		Long-term	
	Arriving in Australia	Departing from Australia	Arriving in Australia	Departing from Australia	Departing from Australia	Returning to Australia	Departing from Australia	Returning to Australia
1968 . . .	299,889	311,181	23,473	12,617	251,880	252,773	51,386	36,387
1969 . . .	361,277	372,747	26,867	15,602	288,805	288,990	59,027	38,308
1970 . . .	416,128	431,039	31,194	18,727	352,526	351,929	64,215	42,099
1971 . . .	432,393	450,022	30,500	21,433	413,917	412,598	67,699	47,782
1972 . . .	426,403	441,320	26,559	24,251	504,519	490,962	66,853	54,278

In addition to the basic classification of travellers shown above, certain other characteristics are ascertained. These characteristics are as follows.

- (i) For all travellers: sex, age, marital status, nationality, country of birth, occupation, intended and actual length of stay, purpose of journey and mode of transport.
- (ii) For arrivals: country of last residence, country of embarkation, State of intended residence and State of disembarkation.
- (iii) For departures: country of intended residence, country of disembarkation, State of residence in Australia and State of embarkation.

The categories shown in the previous table are cross-classified by the characteristics listed above and the resulting statistics are shown in considerable detail in the quarterly and annual bulletins *Overseas Arrivals and Departures* (4.1 and 4.23) and in the annual bulletin *Demography* (4.9). Certain unpublished information is available on request. Selected traveller statistics are shown in the following tables.

### OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY BY MARITAL STATUS, AGE AND SEX: AUSTRALIA, 1972

Characteristics	Short-term			Long-term		
	Males	Females	Persons	Males	Females	Persons
OVERSEAS VISITORS ARRIVING						
Marital status						
Never married . . .	73,679	58,647	132,326	9,507	6,778	16,285
Married . . .	158,536	101,100	259,636	4,864	4,130	8,994
Widowed or divorced . . .	9,686	24,755	34,441	392	888	1,280
Age (years)						
0-14 . . .	19,625	18,987	38,612	2,045	2,000	4,045
15-24 . . .	28,792	26,881	55,673	6,488	4,932	11,420
25-44 . . .	100,333	53,036	153,369	4,943	3,082	8,025
45-64 . . .	73,221	61,561	134,782	969	1,196	2,165
65 and over . . .	19,930	24,037	43,967	318	586	904
Total . . .	241,901	184,502	426,403	14,763	11,796	26,559

OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING  
TEMPORARILY, BY MARITAL STATUS, AGE AND SEX: AUSTRALIA, 1972—*continued*

Characteristics	Short-term			Long-term		
	Males	Females	Persons	Males	Females	Persons
AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY						
Marital status—						
Never married . . . . .	92,353	80,008	172,361	19,979	18,445	38,424
Married . . . . .	172,978	127,794	300,772	12,980	13,591	26,571
Widowed or divorced . . . . .	8,203	23,183	31,386	586	1,272	1,858
Age (years)—						
0-14 . . . . .	29,624	28,515	58,139	7,684	7,401	15,085
15-24 . . . . .	36,446	42,245	78,691	8,333	11,770	20,103
25-44 . . . . .	112,586	71,200	183,786	14,078	10,853	24,931
45-64 . . . . .	79,144	70,796	149,940	2,920	2,631	5,551
65 and over . . . . .	15,734	18,229	33,963	530	653	1,183
Total . . . . .	273,534	230,985	504,519	33,545	33,308	66,853

The following tables show country of residence of visitors arriving (i.e. in which they last stayed for one year or more); and country of disembarkation of Australian residents departing. No information is available as to the country in which Australian residents going abroad in the short-term classification intend to spend most time.

OVERSEAS VISITORS ARRIVING, BY COUNTRY OF RESIDENCE(a)  
AND MODE OF TRANSPORT: AUSTRALIA, 1972

Country of residence(a)	Short-term			Long-term		
	By sea	By air	Total	By sea	By air	Total
Africa—						
Commonwealth countries . . . . .	315	2,250	2,565	37	189	226
South Africa . . . . .	1,204	4,179	5,383	318	164	482
Other . . . . .	24	863	887	10	120	130
America—						
Canada . . . . .	987	13,750	14,737	374	1,081	1,455
Other Commonwealth countries . . . . .	23	651	674	2	33	35
United States of America . . . . .	1,459	76,368	77,827	142	4,031	4,173
Other . . . . .	31	2,617	2,648	8	219	227
Asia—						
Bangladesh, India, Pakistan, Sri Lanka . . . . .	24	3,053	3,077	5	395	400
Hong Kong . . . . .	313	7,510	7,823	2	210	212
Malaysia and Singapore . . . . .	654	13,062	13,716	41	1,190	1,231
Other Commonwealth countries . . . . .	22	482	504	3	73	76
Japan . . . . .	408	14,927	15,335	14	981	995
Other . . . . .	84	17,025	17,109	21	1,575	1,596
Europe—						
United Kingdom and Ireland . . . . .	5,933	51,515	57,448	1,300	2,955	4,255
Other Commonwealth countries . . . . .	99	797	896	10	59	69
France . . . . .	119	3,681	3,800	17	184	201
Germany . . . . .	219	7,998	8,217	58	218	276
Greece . . . . .	21	1,893	1,914	3	303	306
Italy . . . . .	129	4,649	4,778	16	294	310
Netherlands . . . . .	397	7,243	7,640	51	128	179
Other . . . . .	322	10,851	11,173	66	1,103	1,169
Oceania—						
Fiji . . . . .	299	5,374	5,673	13	141	154
New Zealand . . . . .	3,523	107,645	111,168	1,387	6,301	7,688
Papua New Guinea . . . . .	976	35,028	36,004	13	454	467
Other Commonwealth countries . . . . .	541	2,918	3,459	11	119	130
Other . . . . .	57	11,891	11,948	4	113	117
Total . . . . .	18,183	408,220	426,403	3,926	22,633	26,559

(a) Country in which the visitor was last resident for a period of one year or more.

**AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY, BY COUNTRY OF  
DISEMBARKATION(a) AND MODE OF TRANSPORT: AUSTRALIA, 1972**

Country of disembarkation(a)	Short-term			Long-term		
	By sea	By air	Total	By sea	By air	Total
<b>Africa—</b>						
Commonwealth countries . . .	11	1,681	1,692	4	263	267
South Africa . . . . .	699	5,069	5,768	777	657	1,434
Other . . . . .	31	12	43	60	3	63
<b>America—</b>						
Canada . . . . .	798	1,606	2,404	120	168	288
Other Commonwealth countries .	6	66	72	14	5	19
United States of America—ex- cluding Hawaii . . . . .	1,111	20,831	21,942	357	1,617	1,974
Hawaii . . . . .	111	16,062	16,173	17	1,263	1,280
Other . . . . .	345	1,083	1,428	366	81	447
<b>Asia—</b>						
Bangladesh, India, Pakistan, Sri Lanka . . . . .	27	2,782	2,809	3	343	346
Hong Kong . . . . .	946	43,199	44,145	38	3,862	3,900
Malaysia and Singapore . . .	8,910	58,789	67,699	2,682	11,471	14,153
Other Commonwealth countries .	..	379	379	..	63	63
Japan . . . . .	4,621	2,695	7,316	92	154	246
Other . . . . .	111	30,361	30,472	18	3,814	3,832
<b>Europe—</b>						
United Kingdom and Ireland .	9,042	34,870	43,912	5,599	3,925	9,524
Other Commonwealth countries .	156	1,320	1,476	153	102	255
Greece . . . . .	235	14,398	14,633	356	4,227	4,583
Italy . . . . .	4,176	18,452	22,628	3,069	2,214	5,283
Netherlands . . . . .	576	6,467	7,043	603	512	1,115
Other . . . . .	861	17,541	18,402	644	2,924	3,568
<b>Oceania—</b>						
Fiji . . . . .	644	33,463	34,107	65	921	986
New Zealand . . . . .	3,820	109,688	113,508	1,232	4,420	5,652
Papua New Guinea . . . . .	399	28,519	28,918	74	6,727	6,801
Other Commonwealth countries .	288	8,331	8,619	121	191	312
Other . . . . .	459	8,472	8,931	6	456	462
<b>Total . . . . .</b>	<b>38,383</b>	<b>466,136</b>	<b>504,519</b>	<b>16,470</b>	<b>50,383</b>	<b>66,853</b>

(a) Refers to the intended country of disembarkation from the particular ship or aircraft which takes the passenger from Australia.

**OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY  
BY STATED PURPOSE OF JOURNEY AND SEX: AUSTRALIA, 1972**

Purpose of journey	Short-term			Long-term		
	Males	Females	Persons	Males	Females	Persons
<b>OVERSEAS VISITORS ARRIVING</b>						
In transit . . . . .	47,712	29,880	77,592	..	..	..
Business . . . . .	62,496	6,734	69,230	1,923	769	2,692
Holiday . . . . .	109,632	135,368	245,000	3,253	3,546	6,799
Education . . . . .	8,756	4,403	13,159	2,232	1,442	3,674
Other and not stated . . . . .	13,305	8,117	21,422	7,355	6,039	13,394
<b>Total . . . . .</b>	<b>241,901</b>	<b>184,502</b>	<b>426,403</b>	<b>14,763</b>	<b>11,796</b>	<b>26,559</b>
<b>AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY</b>						
Business . . . . .	73,069	9,559	82,628	6,475	3,761	10,236
Holiday . . . . .	176,335	209,472	385,807	17,446	18,620	36,066
Education . . . . .	4,969	3,070	8,039	2,232	1,623	3,855
Other and not stated . . . . .	19,161	8,884	28,045	7,392	9,304	16,696
<b>Total . . . . .</b>	<b>273,534</b>	<b>230,985</b>	<b>504,519</b>	<b>33,545</b>	<b>33,308</b>	<b>66,853</b>



## Short-term travel

Information about the countries of residence of short-term visitors, the countries of disembarkation of Australian residents travelling overseas in the short-term, and intended lengths of stay, are of particular interest to the tourist industry.

OVERSEAS VISITORS ARRIVING BY COUNTRY OF RESIDENCE AND INTENDED LENGTH OF STAY  
AND AUSTRALIAN RESIDENTS DEPARTING BY COUNTRY OF DISEMBARKATION AND INTENDED  
LENGTH OF STAY: AUSTRALIA, 1972

Country of residence (visitors) and country of disembarkation (residents)	Overseas visitors arriving—intended length of stay						Australian residents departing—intended length of stay					
	Under 1 week	1 week and under 1 month	1 month and under 3 months	3 months and under 12 months	Indefin- ite, not stated etc.	Total	Under 1 week	1 week and under 1 month	1 month and under 3 months	3 months and under 12 months	Indefin- ite, not stated etc.	Total
<b>Africa—</b>												
Commonwealth countries	719	562	628	439	217	2,565	23	242	697	640	90	1,692
South Africa . . . . .	1,666	1,471	1,133	756	357	5,383	25	840	2,434	2,052	417	5,768
Other . . . . .	303	208	155	156	65	887	..	2	11	26	4	43
<b>America—</b>												
Canada	2,169	7,069	3,085	1,621	793	14,737	10	468	980	769	177	2,404
Other Commonwealth countries	132	280	164	68	30	674	..	19	33	14	6	72
United States of America— excluding Hawaii	24,628	39,566	7,943	3,685	2,005	77,827	272	6,198	8,545	5,340	1,587	21,942
Hawaii . . . . .	459	5,826	6,541	2,409	938	16,173	459	5,826	6,541	2,409	938	16,173
Other . . . . .	628	978	438	410	194	2,648	8	270	559	428	163	1,428
<b>Asia—</b>												
Bangladesh, India, Pakistan, Sri Lanka . . . . .	845	869	552	504	307	3,077	32	480	996	1,119	182	2,809
Hong Kong . . . . .	2,135	2,627	1,714	772	575	7,823	1,713	7,569	17,702	14,535	2,626	44,145
Malaysia and Singapore . . . . .	2,727	3,964	2,935	2,628	1,462	13,716	2,331	22,329	19,694	16,985	6,360	67,699
Other Commonwealth countries	116	98	197	47	46	504	..	8	44	266	61	379
Japan . . . . .	6,064	5,944	1,529	841	957	15,335	97	1,369	4,978	515	357	7,316
Other . . . . .	5,894	5,019	3,023	2,018	1,155	17,109	1,277	8,833	8,567	9,033	2,762	30,472
<b>Europe—</b>												
United Kingdom and Ireland . . . . .	10,927	13,359	15,778	12,857	4,527	57,448	67	3,448	17,936	19,514	2,947	43,912
Other Commonwealth countries	95	108	219	418	56	896	..	4	59	1,320	93	1,476
Greece . . . . .	246	212	215	1,018	223	1,914	17	453	2,268	9,964	1,931	14,633
Italy . . . . .	914	869	1,034	1,555	406	4,778	29	859	4,543	14,269	2,928	22,628
Netherlands . . . . .	1,539	1,165	1,939	2,078	919	7,640	8	507	3,336	2,801	391	7,043
Other . . . . .	6,820	6,201	4,450	3,991	1,728	23,190	21	753	5,860	10,360	1,408	18,402
<b>Oceania—</b>												
Fiji . . . . .	1,637	1,629	1,140	804	463	5,673	3,963	25,358	2,395	1,080	1,311	34,107
New Zealand . . . . .	30,778	54,782	11,803	5,679	8,126	111,168	9,820	76,755	15,460	6,492	4,981	113,508
Papua New Guinea . . . . .	5,967	7,995	12,876	8,137	1,029	36,004	4,535	11,380	6,977	2,398	3,628	28,918
Other Commonwealth countries	793	913	809	691	253	3,459	834	6,612	510	239	424	8,619
Other . . . . .	2,719	3,409	3,745	1,016	1,059	11,948	824	5,090	1,665	953	399	8,931
<b>Total . . . . .</b>	<b>110,461</b>	<b>159,297</b>	<b>77,504</b>	<b>52,189</b>	<b>26,952</b>	<b>426,403</b>	<b>26,365</b>	<b>185,672</b>	<b>132,790</b>	<b>123,521</b>	<b>36,171</b>	<b>504,519</b>

Short-term travel is subject to marked seasonal variation, December being the peak month for the arrival of visitors and the departure of Australian residents.

OVERSEAS VISITORS AND AUSTRALIAN RESIDENTS: ARRIVALS AND DEPARTURES  
BY MONTH OF ARRIVAL OR DEPARTURE AND MODE OF TRANSPORT  
AUSTRALIA, 1972

Month	Overseas visitors						Australian residents					
	Arriving			Departing			Departing			Returning		
	By sea	By air	Total	By sea	By air	Total	By sea	By air	Total	By sea	By air	Total
January . . . . .	2,011	34,412	36,423	2,901	48,887	51,788	3,223	26,808	30,031	4,208	57,612	61,820
February . . . . .	1,865	36,188	38,053	2,133	39,601	41,734	4,698	21,410	26,108	2,479	30,238	32,717
March . . . . .	2,087	36,725	38,812	2,294	37,452	39,746	4,183	36,855	41,038	2,665	26,597	29,262
April . . . . .	991	27,685	28,676	1,605	34,392	35,997	3,724	44,943	48,667	1,375	26,839	28,214
May . . . . .	1,213	28,929	30,142	1,519	33,561	35,080	3,957	43,158	47,115	3,181	32,125	35,306
June . . . . .	783	23,025	23,808	1,582	25,832	27,414	4,480	44,134	48,614	2,940	32,197	35,137
July . . . . .	983	27,751	28,734	1,007	26,567	27,574	2,241	37,790	40,031	3,352	35,680	39,032
August . . . . .	859	33,062	33,921	957	33,211	34,168	2,520	50,051	52,571	2,659	44,067	46,726
September . . . . .	1,051	28,700	29,751	848	32,691	33,539	1,936	30,241	32,177	2,233	56,606	58,839
October . . . . .	1,294	38,673	39,967	1,414	36,992	38,406	2,169	27,585	29,754	3,948	48,567	52,515
November . . . . .	2,267	38,868	41,135	1,923	36,836	38,759	2,731	28,945	31,676	3,286	35,645	38,930
December . . . . .	2,779	54,202	56,981	966	36,149	37,115	2,521	74,216	76,737	2,883	29,580	32,463
<b>Total . . . . .</b>	<b>18,183</b>	<b>408,220</b>	<b>426,403</b>	<b>19,149</b>	<b>422,171</b>	<b>441,320</b>	<b>38,383</b>	<b>466,136</b>	<b>504,519</b>	<b>35,209</b>	<b>455,753</b>	<b>490,962</b>

### Long-term travel

Many long-term travellers travel for business or education and intend to follow an occupation in the country visited during their stay in Australia or overseas. This is evident from the statistics shown in the table on page 394 which classify travellers according to the purpose of their journey. Statistics of the occupations of long-term visitors arriving in Australia and Australian residents departing overseas (long-term) are of general interest and are shown in the following table.

#### OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING, BY OCCUPATION AND SEX: AUSTRALIA, 1972

Occupation group	Overseas visitors arriving			Australian residents departing		
	Males	Females	Persons	Males	Females	Persons
Professional, technical, and related workers .	2,431	1,979	4,410	5,433	5,385	10,818
Administrative, executive, and managerial workers . . . . .	958	104	1,062	1,725	223	1,948
Clerical workers . . . . .	519	1,908	2,427	2,158	6,124	8,282
Sales workers . . . . .	521	193	714	1,028	641	1,669
Farmers, fishermen, hunters, timber getters, and related workers . . . . .	444	15	459	499	32	531
Miners, quarrymen, and related workers . .	69	..	69	155	..	155
Workers in transport and communication .	508	105	613	975	247	1,222
Craftsmen and production-process workers .	2,620	218	2,838	6,593	883	7,476
Labourers(a) . . . . .	733	..	733	3,943	..	3,943
Service (protective and other), sport, and recreation workers . . . . .	1,072	525	1,597	904	1,030	1,934
Occupation inadequately described or not stated . . . . .	678	162	840	645	171	816
Persons not in the labour force—						
Children and students . . . . .	3,892	3,132	7,024	8,869	8,489	17,358
Other . . . . .	318	3,455	3,773	618	10,083	10,701
<b>Total . . . . .</b>	<b>14,763</b>	<b>11,796</b>	<b>26,559</b>	<b>33,545</b>	<b>33,308</b>	<b>66,853</b>

(a) Labourers (so described), not elsewhere classified and freight handlers, including waterside workers.

### Direct transit travellers

As indicated on page 392, all the preceding figures in this section exclude persons who arrive in and depart from Australia on the same ship's journey or on the same flight or who do not leave the airports' transit area. Persons thus excluded are not normally considered visitors to Australia. For instance, settlers or other persons going to New Zealand, Papua New Guinea, or other neighbouring countries, or leaving such countries may travel through Australia on their way. On the other hand, all persons visiting Australia on cruise vessels, which may remain in Australian waters for a considerable time, are also treated as direct transit travellers and are thus excluded from the figures shown on previous pages. Information about direct transit passengers on ships calling at Australian ports is given in the next table.

#### OVERSEAS SHIPPING PASSENGERS IN DIRECT TRANSIT(a): AUSTRALIA, 1970 TO 1972

Approximate period from first to last Australian port (days)	1970		1971		1972	
	Passengers	Passenger days	Passengers	Passenger days	Passengers	Passenger days
Less than 3 . . . . .	3,942	5,057	3,965	6,316	5,066	8,267
3 and less than 5 . . . . .	4,701	14,924	2,429	8,592	3,752	12,211
5 and less than 7 . . . . .	6,516	37,445	2,402	14,397	2,944	17,348
7 and less than 9 . . . . .	3,745	28,107	7,568	56,586	7,483	54,718
9 and less than 11 . . . . .	3,362	30,668	3,964	37,000	3,155	29,418
11 and less than 22 . . . . .	2,267	26,304	580	7,765	263	3,615
22 and over . . . . .	161	4,506	35	1,024	24	903
<b>Total . . . . .</b>	<b>24,694</b>	<b>147,011</b>	<b>20,943</b>	<b>131,680</b>	<b>22,687</b>	<b>126,480</b>

(a) Persons who arrived in and departed from Australia on the same ship's voyage.

### Sea cruises from Australia

The foregoing statistics exclude passengers on pleasure cruises commencing and finishing in Australia on ships not then engaged in regular voyages, and to which modified documentation requirements apply. Until 13 June 1972 such cruises were restricted to a period not exceeding 30 days and to ports in the South-West Pacific. On that date the period was extended to 6 weeks and the ports visited to those adjoining the Pacific or Indian oceans but excluding those on the east coast of Africa or the west coast of the Americas. The numbers of cruises and cruise passengers during the last three years are shown in the following table.

SHORT PLEASURE CRUISES IN THE SOUTH-WEST PACIFIC  
AUSTRALIA, 1970 TO 1972

Duration of cruise in days(a)	1970		1971		1972	
	Cruises	Passengers	Cruises	Passengers	Cruises	Passengers
Less than 7 . . . . .	3	3,543	2	1,672	..	..
7 and less than 10 . . . . .	3	2,993	3	3,443	6	6,604
10 and less than 13 . . . . .	18	18,912	7	6,568	14	12,574
13 and less than 16 . . . . .	12	11,725	31	28,195	30	20,999
16 and less than 19 . . . . .	9	4,514	20	2,542	8	4,359
19 and less than 22 . . . . .	..	..	2	1,742	2	740
22 and less than 31 . . . . .	3	1,897	..	..	3	1,509
31 and over . . . . .	..	..	..	..	1	249
<b>Total . . . . .</b>	<b>48</b>	<b>43,584</b>	<b>65</b>	<b>44,162</b>	<b>64</b>	<b>47,034</b>

(a) The duration of a cruise is the period during which the ship is absent from Australia.

### Tourist organisation

The Australian Tourist Commission was established by the Commonwealth Government under the *Australian Tourist Commission Act* 1967. Its objectives are the encouragement of visits to Australia, and travel in Australia by people from other countries. The seven man Commission comprises a chairman appointed by the Commonwealth Government; two appointees to represent private industry, selected by the Commonwealth Government from a panel of names put forward by the Australian National Travel Association; two other voting members, at least one of whom is an officer of the Public Service of the Commonwealth; and two non-voting representatives nominated by the State Governments.

For 1971-72 the Commonwealth Government provided \$2,650,000 to the Commission, to be spent, mainly in overseas countries, on advertising campaigns and in associated promotional activities. The Commission brings to Australia travel agents, writers, photographers and other publicists to see at first hand what the country has to offer visitors. It takes no part in the detailed organisation of tourist activities in Australia but is a member of the Australia and New Zealand Government Tourist Conference and provides the secretariat for the Tourist Ministers' Council. The Minister for Tourism and Recreation is a member of the Tourist Ministers' Council together with Ministers in charge of tourism in the six States, the Northern Territory and Papua New Guinea. The Commission has its Head Office in Melbourne and branch offices in London, Frankfurt, New York, Chicago, Los Angeles, Auckland, Tokyo and Sydney.

The Australian National Travel Association, which is described on pages 1161-2 of the special article Travel and Tourism in Year Book No. 52, was formerly responsible, *inter alia*, for the promotion overseas of Australia as a tourist destination. Since the creation of the Australian Tourist Commission, the Association concentrates on the encouragement of the growth and development of travel and tourism within Australia, and the improvement of the standard and variety of facilities and services provided by private enterprise for the use of both domestic and overseas visitors. It acts as a co-ordinating body for its members, provides a clearing house for information, and conducts surveys into aspects of local tourist activity. The Association is governed by a Board representative of travel and tourist interests on which the Commonwealth Government is no longer represented. The Association's office is located in Sydney.





## CHAPTER 13

### WELFARE SERVICES

This chapter relates to welfare services other than those concerned specifically with education, health and repatriation. The latter are dealt with, in the main, in the relevant chapters of this Year Book. Apart from a summary of government expenditure on welfare services, the chapter is devoted to a description in some detail of the services provided by the Commonwealth. For information on the many important welfare services provided by State and local governments, especially in the fields of child and Aboriginal welfare, reference should be made to the Year Books or Statistical Registers of the States and the annual reports of the State departments concerned. Information on pension and superannuation schemes provided for government and semi-government employees, mine workers, parliamentarians, and employees of private business is included in the chapter Private Finance.

There are numerous welfare services provided by charitable and other non-government institutions and organisations. There are institutions providing shelter and care for needy, aged, infirm or handicapped persons, neglected children, destitute persons, wayward boys and girls, and the like. Many organisations, too, provide aid in kind (food, clothing, etc.), auxiliary medical and nursing services, and other assistance to relieve suffering and hardship. Considerable work is also done by such organisations in the rehabilitation or establishment in the community of various types of people such as prisoners and migrants, and in the prevention and alleviation of cruelty and maltreatment of any sort. A brief description of the activities of such organisations is included at the end of this chapter.

Further information on subjects dealt with in this chapter is included in the annual bulletins *Australian National Accounts* (7.1); *Public Authority Finance: Commonwealth Authorities* (5.12); *Public Authority Finance* (5.33); *Public Authority Finance: State Governments; Social Services* (5.37). Current and summarised information on Commonwealth social services is contained in the *Quarterly Summary of Australian Statistics* (1.3) and the *Monthly Review of Business Statistics* (1.4).

#### Commonwealth expenditure on welfare services

This section deals with various government payments for the relief of the aged, indigent, infirm, widowed and unemployed, assistance to families, Aboriginal welfare, etc. For summary statements of cash payments to persons made by public authorities under various functional heads, see *Public Authority Finance* and other annual bulletins mentioned above. Expenditure by State governments

#### COMMONWEALTH AUTHORITIES, WELFARE: CASH BENEFITS TO PERSONS, 1971-72 (\$'000)

Service, etc.	N.S.W. (a)	Vic.	Qld	S.A. (a)	W.A.	Tas.	N.T. (a)	A.C.T. (a)	Abroad	Total
Age pensions . . . . .	253,644	178,368	108,674	65,227	49,107	21,002	1,549	2,041	709	680,322
Invalid pensions . . . . .	58,666	31,504	22,768	11,318	8,267	4,541	694	385	51	138,194
Child endowment . . . . .	73,948	60,890	32,040	19,766	18,188	7,196	1,725	2,800	57	216,610
Commonwealth rehabilitation service . . . . .	1,485	1,299	618	563	502	130	..	4	..	4,602
Funeral benefits . . . . .	613	418	244	150	108	42	..	5	..	1,583
Maternity allowances . . . . .	3,085	2,376	1,251	707	724	260	86	126	2	8,617
Tuberculosis campaign—allowances . . . . .	217	157	143	48	32	33	..	..	..	630
Unemployment benefits, sickness and special benefits . . . . .	15,406	11,798	6,988	4,394	4,298	1,542	154	174	..	44,754
Widows' pensions . . . . .	37,383	28,689	15,739	10,458	7,180	3,842	575	626	135	104,627
Sheltered employment allowances . . . . .	343	..	303	96	..	..	..	..	..	742
Deserted wives' benefits . . . . .	1,258	1,970	1,002	464	981	201	..	..	..	5,876
Personal care . . . . .	450	525	359	285	144	65	1	1	..	1,830
Delivered meals . . . . .	118	102	29	48	28	10	..	1	..	338
Emergency assistance to wool-growers(b) . . . . .	93	4	59	8	14	5	..	3	..	187
Other(c) . . . . .	..	..	..	..	..	..	..	..	..	4,167
<b>Total welfare</b> . . . . .	<b>446,709</b>	<b>318,102</b>	<b>189,915</b>	<b>113,739</b>	<b>89,669</b>	<b>38,870</b>	<b>4,784</b>	<b>6,167</b>	<b>954</b>	<b>1,213,077</b>

(a) State totals for New South Wales and South Australia also include most of the unallocable expenditure on cash benefits to persons resident in the Australian Capital Territory and the Northern Territory respectively. (b) For details see Chapter 22, Rural Industry. (c) Expenditures on this item are unallocable and are included in total only.

on certain welfare services is shown on page 418. Commonwealth expenditure on welfare services is financed through the National Welfare Fund from general or special departmental appropriations, other trust funds, and specific purpose grants to the States. Outlay by Commonwealth Authorities on Aboriginal advancement is shown on page 417. Analyses of Commonwealth expenditure by function and economic type are given in Chapter 18—Public Authority Finance and, in more detail, in the bulletin *Public Authority Finance: Commonwealth Authorities*. The table on the previous page sets out details of welfare cash benefits to persons during the year 1971–72 and the following table shows details for the five years 1967–68 to 1971–72.

COMMONWEALTH AUTHORITIES, WELFARE: CASH BENEFITS TO PERSONS  
1967–68 TO 1971–72  
(\$'000)

<i>Service, etc.</i>	1967–68	1968–69	1969–70	1970–71	1971–72
Age pensions . . . . .	513,984	558,587	641,982	582,889	680,322
Invalid pensions . . . . .				119,387	138,194
Child endowment . . . . .	187,920	193,263	220,121	r198,442	216 610
Commonwealth rehabilitation service . . . . .	1,944	2,260	2,758	3,646	4,602
Funeral benefits . . . . .	1,338	1,571	1,512	1,653	1,583
Maternity allowances . . . . .	7,349	7,960	8,000	8,554	8,617
Tuberculosis campaign—allowances . . . . .	1,091	921	771	659	630
Unemployment benefits, sickness and special benefits	18,832	16,830	18,592	23,478	44,754
Widows' pensions . . . . .	61,061	69,080	81,753	90,514	104,627
Sheltered employment allowances . . . . .	104	288	436	590	742
Deserted wives' benefits . . . . .	201	1,149	1,882	3,691	5,876
Personal care . . . . .	..	..	1,133	1,592	1,830
Delivered meals . . . . .	..	..	196	341	338
Emergency assistance to woolgrowers(a) . . . . .	..	..	..	21,327	187
Other . . . . .	r2,273	r3,058	2,991	r3,950	4,167
<b>Total welfare . . . . .</b>	<b>r796,098</b>	<b>r854,966</b>	<b>r982,125</b>	<b>r1,060,713</b>	<b>1,213,077</b>

(a) For details see Chapter 22, Rural Industry.

### Commonwealth social services

Under the provisions of Section 51 of the Constitution, the Commonwealth Government is empowered to legislate on:

'(xxiii) Invalid and old age pensions:

'(xxiiiA) The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances:'.

The latter paragraph was inserted in the Constitution after being accepted by the electors at a referendum in 1946.

Before 1947, Commonwealth social service benefits were paid under various Acts. On 1 July 1947 with the passage of the *Social Services Consolidation Act 1947*, all Acts providing social service benefits were amalgamated. The Act is at present styled the *Social Services Act 1947–1972*.

### Reciprocal social services agreements with other countries

*New Zealand.* An agreement between the Governments of Australia and New Zealand for reciprocity in social services came into operation on 3 September 1943 and was amended from 1 July 1949. The reciprocal arrangements cover age and invalid pensions, widows' pensions, child endowment, and unemployment and sickness benefits, and apply to both permanent and temporary changes of residence. Residence in one country may be treated as residence in the other country in relation to entitlement to benefits in which a residential qualification applies. Persons from one country taking up a permanent residence in the other country become eligible for any of the specified benefits of the new country under the same conditions (with one or two exceptions) as apply to citizens of that country. Persons in receipt of any of the specified benefits in one country may continue to receive those benefits while temporarily absent in the other country.



*United Kingdom.* A reciprocal agreement on social services between the United Kingdom and Australia came into operation on 7 January 1954. Amendments became effective from 1 April 1958 and 1 October 1962. Under the current agreement residence in one country may be treated as residence in the other country as the basis for entitlement to benefits in which a residential qualification applies. Australians going to the United Kingdom for permanent residence are treated in the United Kingdom as if they had been insured under the National Insurance Scheme while in Australia, so that they can qualify for various National Insurance benefits. There is also provision for the safeguard of social service rights for persons going from one country to the other for temporary residence.

### Social service benefits provided

The social service benefits provided by the Commonwealth Government under the *Social Services Act 1947-1972*, and the date on which each came into operation, are:

Age pension . . . . .	1 July 1909
Invalid pension . . . . .	14 October 1910
Allowances for wife and first child of pensioners who are invalided . . . . .	8 July 1943
Allowances for second and subsequent children of pensioners who are invalided . . . . .	11 October 1956
Allowances for wife and children of other age pensioners	14 October 1965
Guardians' allowances for widowed and other unmarried age and invalid pensioners with children in their care	14 October 1965
Special payments to a surviving pensioner . . . . .	10 October 1968
Widows' pensions . . . . .	30 June 1942
Supplementary assistance (age, invalid and widows' pensions) . . . . .	15 October 1958
Supplementary allowance (long-term sickness benefit) .	28 September 1970
Widows' pensions—allowances for second and sub- sequent children . . . . .	2 October 1956
Funeral benefit . . . . .	1 July 1943
Maternity allowance . . . . .	10 October 1912
Child endowment . . . . .	1 July 1941
Child endowment—student children . . . . .	14 January 1964
Unemployment benefit . . . . .	1 July 1945
Sickness benefit . . . . .	1 July 1945
Sickness benefit (long-term) . . . . .	28 September 1970
Special benefit . . . . .	1 July 1945
Sheltered employment allowance . . . . .	30 June 1967
Commonwealth Rehabilitation Service . . . . .	10 December 1948
Training scheme for widow pensioners . . . . .	27 September 1968
Wife's pension . . . . .	5 October 1972

### Age and invalid pensions

Age pensions are payable to men, sixty-five years of age and over, and women, sixty years of age and over, who have lived in Australia continuously for at least ten years, which need not be immediately prior to the date of claim for a pension. If a person has completed five years, but not ten years, continuous residence, and has lived in Australia for periods which exceed a total of ten years, the period of continuous residence otherwise required is reduced by the total of his periods of residence in Australia in excess of ten years. Any periods of absence during which a person's home remains in Australia, and absences in certain other circumstances, are counted as residence, and any absence in an external Territory of the Commonwealth, while not counting as residence, does not interrupt continuity of residence in Australia. Residence in New Zealand or the United Kingdom may be treated as residence in Australia.

Invalid pensions are payable to persons, sixteen years of age and over, who have lived in Australia for a continuous period of five years (including certain absences) at any time, and who are permanently incapacitated for work to the extent of at least eighty-five per cent, or permanently blind. If the incapacity or blindness first occurred outside Australia, except during a temporary absence, the residence qualification is the same as for an age pension.

A wife's pension is payable to the wife of a pensioner not entitled, in her own right, to an age, invalid or service pension. There is no residence qualification to be met.

*Current rates of pension.* The maximum standard rate was increased to \$1,040 per annum (\$20.00 a week) from 5 October 1972. This is payable to a single, widowed or divorced pensioner, or a married pensioner whose spouse is not receiving a pension or a tuberculosis allowance. The standard rate

may also be paid to each of a married pensioner couple who are living apart for an indefinite period due to illness or infirmity of either or both. The maximum rate for a married pensioner couple was increased to \$1,794 per annum (\$34.50 a week) from 5 October 1972, (i.e., \$897 per annum or \$17.25 a week each). For a married person whose spouse receives a tuberculosis allowance, or a service pension, the maximum rate is also \$897 per annum (\$17.25 a week).

Additional pension for each dependent child under 16 years is payable, subject to the means test, at the rate of \$234 per annum (\$4.50 a week). Widowed or other unmarried age or invalid pensioners with a dependent child may receive a guardian's allowance up to \$4 a week, or up to \$6 a week if the child is under 6 years of age or is an invalid child requiring full-time care. Guardian's allowance is also subject to the means test. Eligibility for the additional pension for children is extended to include a child over sixteen years until he reaches twenty-one years, provided he is wholly or substantially dependent on the pensioner and is receiving full-time education at a school, college or university. Supplementary assistance of up to \$4 a week, subject to a special means test, is available to pensioners receiving the maximum standard rate pension if they pay rent or pay for board and lodging or for lodging.

At 30 June 1972, 396,017 age and 96,745 invalid pensioners in the standard rate category were receiving a pension of \$18.25 a week or more and 162,300 age and invalid pensioners were in receipt of supplementary assistance. In the married rate category 241,306 age and 21,919 invalid pensioners were receiving a pension of \$16 a week or more.

On the death of one member of a married pensioner couple the surviving pensioner spouse becomes entitled to receive, for up to six fortnightly instalments, the equivalent of the two pensions that would have been paid if the spouse had not died. For the purpose of this provision the term 'pensioner' includes a person in receipt of age, invalid, wife's or service pension; a rehabilitation allowance; or a sheltered employment allowance.

A table showing the maximum rates of pension operating since 1 July 1909 at dates prior to 14 October 1965 is included on page 608 of Year Book No. 51. Details of the respective rates and allowances payable since 14 October 1965 are included in subsequent Year Books.

*Means test.* Age, invalid and wife's pensions (other than pensions paid to blind persons) are subject to a means test which applies to income and property. The rate of pension payable in any case depends on the claimant's *means as assessed*. When calculating means as assessed assets or property owned by the applicant are equated with income by treating each complete \$20 of assets above \$400 as equivalent to an income of \$2 a year. This amount is the property component. Means as assessed may consist entirely of the property component, entirely of income, or of various combinations of property component and income. The annual maximum rate of pension is affected when means exceed the allowable sum of:

For a single, widowed or divorced person . . . . .	\$1,040
For a married pensioner couple . . . . .	\$1,794 (\$897 each)

The effect of the means test in the case of a single, widowed or divorced person, is to reduce the annual maximum standard rate of pension by half of the amount of any means as assessed in excess of \$1,040. No pension is payable where the value of property is \$31,600 or more (\$35,760 or more if qualified for a guardian's allowance at the lower rate and \$37,840 if qualified for the guardian's allowance at the higher rate). Supplementary assistance is reduced by the amount by which means as assessed exceed \$52. For a pensioner couple, the combined maximum married rate of pension is reduced by half of any means as assessed in excess of \$1,794. No pension is payable where the value of property is \$54,640 or more.

Certain types of income are exempted. The main exemptions are: income from property; gifts or allowances from children, parents, brothers, or sisters; benefits from friendly societies; child endowment or other payments for children; Commonwealth health benefits and amounts received from registered benefit organisations. A pensioner's income may also be reduced by up to \$312 per annum (\$6 a week) for each dependent child under sixteen years (twenty-one years if a full-time student).

A special concession is made available to recipients of superannuation pensions and annuities, the annual rate of such payments being converted to a property equivalent for means test purposes by reference to a specific conversion factor. This conversion is to the pensioner's advantage in the majority of cases but where this is not so, the payments continue to be treated as income.

Certain types of property are disregarded. They include the permanent home of the pensioner, his furniture and personal effects, the surrender value (up to \$1,500) of life insurance policies, the capital value of annuities or contingent interests, and the value of reversionary interests.

For the purposes of the means test the income and property of a married person are considered to be half the total income and property of the husband and wife unless they are legally separated or in other special circumstances.

## AGE AND INVALID PENSIONS: STATES AND TERRITORIES, 30 JUNE 1972

<i>Pensions in force</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Age—									
Males .	90,029	65,393	42,811	24,429	18,930	8,057	690	723	251,062
Females .	217,903	156,311	89,189	56,210	41,593	17,611	902	1,912	581,631
Persons .	307,932	221,704	132,000	80,639	60,523	25,668	1,592	2,635	832,693
Invalid—									
Males .	31,658	18,546	12,361	6,643	4,704	2,592	403	226	77,133
Females .	25,602	14,029	10,464	5,489	3,781	1,906	240	174	61,685
Persons .	57,260	32,575	22,825	12,132	8,485	4,498	643	400	138,818

## NEW PENSIONERS, BY SEX AND MARITAL STATUS: AUSTRALIA, 1971-72

<i>Marital status</i>	<i>Age pensioners</i>			<i>Invalid pensioners</i>			<i>Total</i>
	<i>Males</i>	<i>Females(a)</i>	<i>Persons(a)</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	
Single(b) . . .	3,225	4,769	7,994	5,954	3,797	9,751	17,745
Married . . .	21,227	25,471	46,698	9,241	5,445	14,686	61,384
Widowed . . .	3,178	11,098	14,276	745	1,204	1,949	16,225
Divorced . . .	638	976	1,614	647	518	1,165	2,779
<b>Total . . .</b>	<b>28,268</b>	<b>42,314</b>	<b>70,582</b>	<b>16,587</b>	<b>10,964</b>	<b>27,551</b>	<b>98,133</b>

(a) Includes transfers from wives' allowance to age pension. (b) Includes married but permanently separated.

The average age of new age pensioners was 68.3 years for men and 65.9 years for women.

## NEW INVALID PENSIONERS, BY AGE GROUP: AUSTRALIA, 1971-72

		<i>16-19 years</i>	<i>20-44 years</i>	<i>45-59 years</i>	<i>60-64 years</i>	<i>65 years and over</i>	<i>Total</i>
Males . . .	number	1,233	3,019	6,552	5,358	425	16,587
Females . . .	number	1,135	2,428	6,985	233	183	10,964
Persons . . .	number	2,368	5,447	13,537	5,591	608	27,551
	Per cent	9	20	49	20	2	100

NOTE. Persons at or above the qualifying age for age pensions, when granted invalid pensions, are generally those with insufficient residence to qualify for age pension.



## AGE AND INVALID PENSIONS: SUMMARY, AUSTRALIA, 1967-68 TO 1971-72

Year	Pensioners at end of year				Total payments during year(b)	Average weekly pension as at end of year		
	Age		Invalid	Total		Age(c)	Invalid (c)	Age and invalid combined (c)
	Number	Rate(a)						
			No.	No.	\$'000	\$	\$	\$
1967-68	(d)682,265	546	(d)114,745	(d)797,010	513,984	12.22	13.37	12.39
1968-69	(e)705,311	555	(e)121,744	(e)827,055	558,587	13.00	14.70	13.26
1969-70	779,007	602	133,766	912,773	641,982	13.61	15.70	13.91
1970-71	807,711	615	134,075	941,786	702,276	14.36	16.54	14.67
1971-72	832,693	621	138,818	971,511	818,517	16.38	18.98	16.75

(a) Number of pensioners per 1,000 persons of pensionable age (males aged 65 years and over and females aged 60 years and over). (b) Includes allowances and supplementary assistance. (c) Includes supplementary assistance, additional pensions for children, and guardian's allowance, where applicable. (d) The 1967-68 figures are adjusted by reducing the number of invalid pensioners by 3,178 and increasing the number of age pensioners by 1,485 following the introduction of computer processing in New South Wales. (e) The 1968-69 figures are adjusted by reducing the number of invalid pensioners by 1,583 and increasing the number of age pensioners by 1,223 following the introduction of computer processing in Victoria.

**Widows' pensions**

*Rates and conditions.* Widows' pensions are payable according to the following classes. The rates shown are those payable from 10 October 1972 when widows' pensions were increased.

**Class 'A'.** A widow who has the custody, care and control of one or more eligible children under the age of sixteen years or eligible student child—The maximum amount payable is the standard rate pension of \$1,040 per annum (\$20 a week) and a mother's allowance of up to \$208 per annum (\$4 a week) which is increased to \$312 per annum (\$6 a week) if caring for a child under six years of age or an invalid child requiring full-time care. In addition, extra pension of \$234 per annum (\$4.50 a week) for each child under sixteen years is payable subject to the means test. Payment may be made for a child over sixteen years until he or she reaches twenty-one years, if he or she is wholly or substantially dependent on the widow and is receiving full-time education at a school, college or university.

**Class 'B'.** A widow who has no eligible children under sixteen years of age or full-time student children in her custody, care and control, and who is not less than fifty years of age or who, after having attained the age of forty-five years, ceased to receive a Class 'A' widow's pension because she no longer had the custody, care and control of a child—The maximum amount payable is \$897 per annum (\$17.25 a week).

**Class 'C'.** A widow who is under fifty years of age and has no eligible children under the age of sixteen years, or full-time student children, in her custody, care and control, but is in necessitous circumstances within the twenty-six weeks after the death of her husband—\$17.25 a week for not more than twenty-six weeks after the death of her husband. If the widow is pregnant this period may be extended until the child's birth. She may then become eligible for a Class 'A' widow's pension.

Widow pensioners may receive supplementary assistance of up to \$208 per annum (\$4 a week), subject to a special means test, if they pay rent or pay for board and lodging or for lodging.

For classes 'A' and 'B' the term 'widow' includes a wife who has been deserted by her husband without just cause for a period of at least six months; a divorcee; a woman whose husband has been imprisoned for at least six months; and a woman whose husband is in a mental hospital. Certain dependent females also may qualify for 'A', 'B' or 'C' Class pensions.

A period of residence in Australia before claiming pension is not required if a woman and her husband were residing permanently in Australia when she became a widow. In other circumstances, five years continuous residence immediately preceding lodgment of the claim is required, but this is waived in the case of a woman whose husband has died overseas if she has resided continuously in Australia for ten years at any time and returns to Australia to live.

A widow's pension is not payable to a woman receiving an age or invalid pension, a sheltered employment allowance, a tuberculosis allowance, a war widow's pension, nor to a deserted wife or a divorcee who has not taken reasonable action of obtain maintenance from her husband or former husband.

*Means test.* Widows' pensions are subject to a means test on income and property. The rate of pension payable in any case depends on the claimant's *means as assessed*. When calculating the means as assessed of a claimant for Class 'A' widow's pension, no amount in respect of property is taken into account where the value of the widow's property is \$4,500 or less. If the value of property exceeds \$4,500 the widow's total assets or property are equated with income by treating each complete \$20 of assets above \$2,000 as equivalent to an income of \$2 a year. This amount is the property component. Means as assessed may consist entirely of the property component, entirely of income, or of various combinations of the property component and income. The method for calculating the means as assessed of a claimant for Class 'B' widow's pension is the same as for single, widowed or divorced claimants for age or invalid pension (see page 402). In the case of a Class 'A' widow the maximum rate of pension plus the appropriate mother's allowance and additional pension for children, are affected when the widow's means as assessed exceed the allowable sum of \$1,040. The annual maximum standard rate of pension plus the allowances mentioned above are reduced by half of the amount of any means as assessed in excess of \$1,040. No pension is payable where the widow has property valued at \$37,360 or more, or if caring for a child under six years of age or an invalid child requiring full-time care, where she has property valued at \$39,440 or more. For a Class 'B' widow the annual maximum rate of pension is reduced by half of the amount of any means as assessed in excess of \$1,040. No pension is payable where the widow has property valued at \$28,740 or more. There is no specific means test for the Class 'C' pension, which is paid only where it is evident that a widow has insufficient means of support. The types of income and property disregarded for means test purposes are the same as for age and invalid pensions. Supplementary assistance is reduced by the amount by which *means as assessed* exceed \$52.

The average age of new widow pensioners admitted during 1971-72 was: Class 'A', 36.0 years; Class 'B', 57.2 years; Class 'C', 43.0 years; and for all classes, 43.8 years.

#### WIDOWS' PENSIONS: STATES, TERRITORIES, ETC., 1971-72

State, Territory, etc.	Number admitted —all classes (a)	Pensions current at end of year				Average weekly pension at end of year (b)	Amount paid in pensions during year (b) (c)
		Class 'A'	Class 'B'	Class 'C'	All classes		
						\$	\$'000
New South Wales . . . . .	6,634	17,711	15,213	37	32,961	23.25	37,383
Victoria . . . . .	5,734	13,995	11,782	10	25,787	23.26	28,689
Queensland . . . . .	2,591	7,306	6,332	14	13,652	23.69	15,739
South Australia . . . . .	1,872	4,898	4,459	6	9,363	23.06	10,458
Western Australia . . . . .	1,706	3,368	3,417	10	6,795	22.44	7,180
Tasmania . . . . .	631	1,923	1,281	1	3,205	24.80	3,842
Northern Territory . . . . .	98	267	180	1	448	26.80	575
Australian Capital Terri- tory . . . . .	147	343	229	1	573	23.63	626
Abroad . . . . .	..	(d)	(d)	(d)	(d)	..	135
<b>Total . . . . .</b>	<b>19,413</b>	<b>49,811</b>	<b>42,893</b>	<b>80</b>	<b>92,784</b>	<b>23.31</b>	<b>104,627</b>

(a) Excludes transfers from one class to another. (b) Includes supplementary assistance and allowances. (c) Includes payments to benevolent homes for maintenance of pensioners. (d) Included in the figures for the State or Territory in which the pensioner is normally domiciled.

#### WIDOWS' PENSIONS: SUMMARY, AUSTRALIA, 1967-68 TO 1971-72

Year	Number admitted —all classes (a)	Pensions current at end of year				Average weekly pension at end of year (b)	Amount paid in pensions during year (b) (c)
		Class 'A'	Class 'B'	Class 'C'	All classes		
						\$	\$'000
1967-68 . . . . .	16,104	(d)35,899	(d)39,065	105	(d)75,069	15.79	61,061
1968-69 . . . . .	15,993	38,038	39,768	91	77,897	17.63	69,080
1969-70 . . . . .	22,466	44,064	42,771	86	86,921	18.96	81,753
1970-71 . . . . .	18,223	47,146	43,157	96	90,399	19.72	90,514
1971-72 . . . . .	19,413	49,811	42,893	80	92,784	23.31	104,627

(a) Excludes transfers from one class to another. (b) Includes supplementary assistance and allowances. (c) Includes payments to benevolent homes for maintenance of pensioners. (d) During 1967-68, a reduction of 769 Class 'A' and 233 Class 'B' pensioners was made following the introduction of computer processing in New South Wales.

For details of training scheme for widow pensioners, see page 413.

**Funeral benefits**

A benefit of up to \$40 is payable to an eligible age, invalid or widow pensioner who is liable for the funeral costs of another such deceased pensioner, a deceased child or a deceased spouse; a benefit of up to \$20 is payable to any (other) person liable for the funeral costs of a deceased age or invalid pensioner in respect of whose burial a funeral benefit may be granted.

**FUNERAL BENEFITS GRANTED: STATES, TERRITORIES, ETC., 1966-67 TO 1971-72**  
(Number)

<i>State, Territory, etc.</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
New South Wales . . . .	18,567	17,092	21,830	20,215	22,430	20,802
Victoria . . . . .	12,386	12,292	13,897	12,844	14,881	13,973
Queensland . . . . .	7,188	7,129	7,930	7,754	8,505	8,046
South Australia . . . .	4,031	4,531	4,855	4,643	4,937	4,976
Western Australia . . .	3,129	3,151	3,397	3,442	3,741	3,649
Tasmania . . . . .	1,347	1,345	1,438	1,437	1,408	1,474
Northern Territory . . .	2	7	5	15	8	7
Australian Capital Territory .	108	122	136	148	175	178
Abroad . . . . .	6	3	3	4	3	8
<b>Total . . . . .</b>	<b>46,764</b>	<b>45,672</b>	<b>53,491</b>	<b>50,502</b>	<b>56,088</b>	<b>53,113</b>

Total cost of funeral benefits granted during 1971-72 was \$1,582,781.

**Maternity allowances**

Maternity allowances are paid to provide financial assistance towards the expenses associated with the birth of children and are additional to the benefits provided under the Commonwealth health scheme. They are not subject to a means test.

A maternity allowance is payable to a woman who gives birth to a child if she resides, or intends to reside permanently in Australia and gives birth to the child in Australia, and to a woman who gives birth to a child on board a ship travelling to Australia if she intends to reside permanently in Australia, provided she receives no benefit similar to a maternity allowance from the country from which she came. A woman who gives birth to a child during a temporary absence from Australia may also be eligible. An alien mother may receive the allowance if she or her husband resided in Australia for at least twelve months immediately prior to the birth of the child, or if she is likely to remain in Australia permanently. Payment may be made in respect of the birth of a still-born child, or a child which lives for less than twelve hours, if the child had developed for at least five and a half months.

*Rates of allowance.* The allowance is \$30 if the mother has no other children under sixteen, \$32 if she has one or two other children under sixteen, and \$35 if she has three or more other children under sixteen. In the case of multiple births the allowance is increased by \$10 for each additional child born. An advance payment of \$20 may be made four weeks before the expected date of birth. The balance is payable immediately after the birth.

**MATERNITY ALLOWANCES: CLAIMS PAID AT EACH RATE**  
**STATES AND TERRITORIES, ETC., 1971-72**  
(Number)

State, Territory, etc.	Single births			Multiple births								Total claims paid
				Twins			Triplets			Other		
	\$30	\$32	\$35	\$40	\$42	\$45	\$50	\$52	\$55	\$60	\$112	
New South Wales	39,811	44,836	11,804	326	504	184	3	3	1	1	1	97,474
Victoria	28,763	35,668	9,791	262	420	173	2	3	..	..	..	75,082
Queensland	14,832	17,536	6,539	102	170	67	..	..	..	..	..	39,246
South Australia	8,975	10,693	2,467	74	140	37	..	4	..	..	..	22,390
Western Australia	9,152	10,585	2,882	64	117	39	..	2	1	..	..	22,842
Tasmania	3,025	3,850	1,250	21	47	17	..	..	1	..	..	8,211
Northern Territory	971	1,168	562	9	9	2	..	..	..	..	..	2,721
Australian Capital Territory	1,588	1,899	442	16	26	9	1	..	..	..	..	3,981
Abroad	59	..	..	..	..	..	..	..	..	..	..	59
Total	107,176	126,235	35,737	874	1,433	528	6	12	3	1	1	272,006



**MATERNITY ALLOWANCES: CLAIMS PAID, AUSTRALIA  
1967-68 TO 1971-72**

Year	Claims paid			Amount paid
	Single births	Multiple births	Total	
1966-67 . . . . .	226,339	2,446	228,785	\$'000 7,294
1967-68 . . . . .	228,324	2,452	230,776	7,349
1968-69 . . . . .	248,599	2,688	251,287	7,960
1969-70 . . . . .	249,149	2,755	251,904	8,000
1970-71 . . . . .	267,235	2,817	270,052	8,554
1971-72 . . . . .	269,148	2,858	272,006	8,617

**Child endowment**

A person who is resident in Australia and has the custody, care, and control, of one or more children under the age of sixteen years or of a full-time student child over sixteen but under twenty-one years, or an approved institution of which children are inmates, is qualified to receive an endowment in respect of each such child. Full-time student children are those receiving full-time education at a school, college or university and who are not in employment or engaged in work on their own account. There are provisions to meet cases of families divided because of divorce, separation, unemployment or death of a parent. There is no means test.

Twelve months residence in Australia is required if the claimant and the child were not born here, but this requirement is waived if the Department of Social Security is satisfied that they are likely to remain in Australia permanently. Where the child's father is not a British subject, endowment is payable if the child was born in Australia, if the mother is a British subject, or if the Department is satisfied that the child is likely to remain permanently in Australia. Under certain conditions, endowment may be paid to Australians who are temporarily absent overseas.

*Rates of endowment.* Since 12 October 1971 the weekly rates have been: children under sixteen years—50 cents for the first or only child; \$1.00 for the second; \$2.00 for the third; and then increases of 25 cents for each subsequent child, making \$2.25 for the fourth, \$2.50 for the fifth and so on. For each eligible student child the rate is \$1.50. The rate payable for each child under sixteen years in an approved institution is \$2.00 a week.

*Number of claims and endowed children—children under sixteen years.* The number of families receiving child endowment at 30 June 1972 in respect of children under sixteen years was 1,843,478 an increase of 45,850 or 2.55 per cent during the year.

**CHILD ENDOWMENT: CLAIMS AND ENDOWED CHILDREN UNDER 16 YEARS  
STATES, TERRITORIES, ETC., 30 JUNE 1972**

State, Territory, etc.	Family groups			Approved institutions		Total endowed children under 16 years
	Claims in force	Endowed children under 16 years		Number (a)	Endowed child inmates under 16 years	
		Number	Average number per claim			
New South Wales . . . . .	651,033	1,373,981	2.11	135	5,824	1,379,805
Victoria . . . . .	511,947	1,106,485	2.16	128	5,673	1,112,158
Queensland . . . . .	260,419	584,743	2.25	40	1,800	586,543
South Australia . . . . .	170,599	362,830	2.13	64	1,545	364,375
Western Australia . . . . .	153,600	338,855	2.21	77	4,600	343,455
Tasmania . . . . .	57,566	128,946	2.24	23	447	129,393
Northern Territory . . . . .	13,954	32,933	2.36	16	277	33,210
Australian Capital Territory . . . . .	24,201	52,698	2.18	2	33	52,731
Abroad . . . . .	159	309	1.94	..	..	309
Total . . . . .	1,843,478	3,981,780	2.16	485	20,199	4,001,979

(a) All institutions approved for receipt of endowment.

The following table shows, as at 30 June 1972, the number of claims in force and the number of endowed children under sixteen years in family groups, classified according to the number of endowed children in the family group. The families included in the table are not necessarily made up entirely of the children of one marriage, but may include step-children, foster children, adopted children, and any other children in the custody, care and control of the claimant.

**CHILD ENDOWMENT: ENDOWED CHILDREN UNDER 16 YEARS IN FAMILY GROUPS  
TOTAL, 30 JUNE 1972**

<i>Number of endowed children under 16 years in family group</i>	<i>Claims in force</i>	<i>Endowed children under 16 years</i>	<i>Number of endowed children under 16 years in family group</i>	<i>Claims in force</i>	<i>Endowed children under 16 years</i>
1 . . . . .	635,494	635,494	9 . . . . .	948	8,532
2 . . . . .	632,668	1,265,336	10 . . . . .	277	2,770
3 . . . . .	348,137	1,044,411	11 . . . . .	107	1,177
4 . . . . .	146,507	586,028	12 . . . . .	40	480
5 . . . . .	50,630	253,150	13 . . . . .	21	273
6 . . . . .	19,162	114,972	14 . . . . .	2	28
7 . . . . .	6,774	47,418	15 or more . . . . .	3	47
8 . . . . .	2,708	21,664	<b>Total . . . . .</b>	<b>1,843,478</b>	<b>3,981,780</b>

**CHILD ENDOWMENT: CLAIMS AND ENDOWED STUDENT CHILDREN  
STATES, TERRITORIES, ETC., 30 JUNE 1972**

State, Territory, etc.	Family groups			Approved institutions		Total endowed student children
	Claims in force	Endowed student children		Number(a)	Endowed student child inmates	
		Number	Average number per claim			
New South Wales . . . . .	76,087	83,810	1.10	32	146	83,956
Victoria . . . . .	69,910	78,216	1.12	30	138	78,354
Queensland . . . . .	18,504	20,336	1.10	9	91	20,427
South Australia . . . . .	21,251	23,306	1.10	18	145	23,451
Western Australia . . . . .	14,039	15,390	1.10	39	62	15,452
Tasmania . . . . .	5,587	6,207	1.11	5	6	6,213
Northern Territory(b) . . . . .	664	720	1.08	2	2	722
Australian Capital Territory . . . . .	3,397	3,913	1.15	..	..	3,913
Abroad . . . . .	27	33	1.22	..	..	33
Total . . . . .	209,466	231,931	1.11	135	590	232,521

(a) Included with approved institutions in second table on page 407. (b) Endowment payments are now being made direct to Aboriginal families instead of through institutions.

**CHILD ENDOWMENT: ENDOWED STUDENT CHILDREN IN FAMILY GROUPS  
TOTAL, 30 JUNE 1972**

<i>Number of endowed student children in family group</i>	<i>Claims in force</i>	<i>Endowed student children</i>	<i>Number of endowed student children in family group</i>	<i>Claims in force</i>	<i>Endowed student children</i>
1 . . . . .	188,273	188,273	4 . . . . .	47	188
2 . . . . .	19,970	39,940	5 or more . . . . .	1	5
3 . . . . .	1,175	3,525	<b>Total . . . . .</b>	<b>209,466</b>	<b>231,931</b>

**CHILD ENDOWMENT: CHILDREN UNDER 16 YEARS  
LIABILITY AND EXPENDITURE, STATES, TERRITORIES, ETC., 1971-72**  
(\$'000)

State, Territory, etc.	Annual liability at 30 June 1972			Total payments to endowees and institutions during year(a)
	Family groups	Approved institutions	Total	
New South Wales . . . .	72,623	606	73,229	67,253
Victoria . . . . .	59,681	590	60,271	54,786
Queensland . . . . .	32,861	187	33,048	30,184
South Australia . . . . .	19,160	161	19,321	17,999
Western Australia . . . .	18,442	478	18,920	17,056
Tasmania . . . . .	7,172	46	7,218	6,735
Northern Territory(b) . . .	1,958	29	1,987	1,683
Australian Capital Territory .	2,822	3	2,825	2,540
Abroad . . . . .	16	..	16	(c)57
<b>Total . . . . .</b>	<b>214,734</b>	<b>2,101</b>	<b>216,835</b>	<b>198,292</b>

(a) See footnote (b) to summary table below. (b) Endowment payments are now being made direct to Aboriginal families instead of through institutions. (c) Includes expenditure for endowed student children; separate figures are not available.

**CHILD ENDOWMENT: STUDENT CHILDREN, LIABILITY, AND  
EXPENDITURE, STATES, TERRITORIES, ETC., 1971-72**  
(\$'000)

State, Territory, etc.	Annual liability at 30 June 1972			Total payments to endowees and institutions during year
	Family groups	Approved institutions	Total	
New South Wales . . . . .	6,537	11	6,548	6,695
Victoria . . . . .	6,101	11	6,112	6,104
Queensland . . . . .	1,586	7	1,593	1,856
South Australia . . . . .	1,818	11	1,829	1,767
Western Australia . . . . .	1,200	5	1,205	1,132
Tasmania . . . . .	484	1	485	461
Northern Territory . . . . .	56	..	56	42
Australian Capital Territory .	305	..	305	260
Abroad . . . . .	3	..	3	(a)
<b>Total . . . . .</b>	<b>18,091</b>	<b>46</b>	<b>18,137</b>	<b>18,317</b>

(a) Included in preceding table showing expenditure for endowed children under sixteen years; separate figures are not available.

**CHILD ENDOWMENT: SUMMARY, AUSTRALIA, 1966-67 TO 1971-72**

At end of year						
Family group claims in force						
Year	For children under 16 years(a)	For student children(a)	Approved institutions	Total endowed children	Annual liability for endowment (b)	Total payments during year (b)
					\$'000	\$'000
1966-67 . . . . .	1,640,390	151,623	487	3,834,917	185,940	(c)199,282
1967-68 . . . . .	1,669,629	158,488	491	3,890,853	196,397	187,920
1968-69 . . . . .	1,701,914	187,500	493	3,996,042	202,034	193,263
1969-70 . . . . .	1,749,734	194,576	456	4,079,378	205,065	(c)220,143
1970-71 . . . . .	1,797,628	196,999	469	4,155,930	207,499	198,467
1971-72 . . . . .	1,843,478	209,466	485	4,234,500	234,972	216,610

(a) Claims by families with children under sixteen and student children are shown in both columns. Information on the number of families having such dual claims is not available. (b) A number of endowments are paid every twelve weeks. During two years out of every three there are four such payments but every third year there are five. Figures for annual liability therefore, reflect trends in expenditure on child endowment more accurately than do figures for payments. (c) Expenditure for this year includes five twelve-weekly payments for endowed children under 16 years.



**Unemployment and sickness benefits**

Unemployment and sickness benefits are paid to males over sixteen and under sixty-five years of age, and females over sixteen and under sixty years of age, who are unemployed or who are temporarily incapacitated for work and thereby suffer loss of income. They must have been living in Australia during the preceding twelve months or be likely to remain permanently in Australia. There is a means test on income. A person receiving an age, invalid or widow's pension, or a service pension (as distinct from a war pension) under the *Repatriation Act 1920-1972* or a tuberculosis allowance, is ineligible to receive a benefit.

For unemployment benefit purposes, a person must establish that he is unemployed, that his unemployment is not due to his being a direct participant in a strike, that he is capable and willing to undertake suitable work, and that he has taken reasonable steps to obtain such work. Registration for employment with the Commonwealth District Employment Office is necessary. For sickness benefit purposes, a person must establish that he is temporarily incapacitated for work because of sickness or accident and that he has thereby suffered a loss of salary, wages or other income. A married woman is not eligible to receive a sickness benefit if it is reasonably possible for her husband to maintain her. Where her husband is able to maintain her only partially, a benefit may be paid at such rate as is considered reasonable in the circumstances.

*Rates of benefit.* The maximum weekly rates of unemployment and sickness benefit payable and the permissible income in respect of benefit periods which commenced on or after 19 February 1972 are as follows.

	<i>Maximum weekly rate</i>	<i>Permissible weekly income</i>
	\$	\$
Adult (21 and over) or married minor . . . .	17.00	6.00
Unmarried person, aged 18-20 years . . . .	11.00	3.00
Unmarried person, aged 16-17 years . . . .	7.50	3.00

The adult rate of benefit is payable to unmarried minors having no parent living in Australia.

Additional benefit of \$8 a week may be paid for a dependent spouse and \$4.50 a week for each child under sixteen years of age in a beneficiary's care. Additional benefit, at the same rate as that for a dependent spouse, may be paid where a woman is keeping house for a claimant who has one or more children under sixteen years of age in his care. It may be granted only if no such benefit is payable for his wife, and the housekeeper is substantially dependent on him but not employed by him.

After six consecutive weekly payments, sickness benefit may be increased to the appropriate long-term rate shown in the table below if the person receiving benefit is not in hospital, or is in hospital but has one or more dependants. The rates of benefits shown, have applied since 27 September 1972.

	<i>Maximum weekly rate</i>	<i>Permissible weekly income</i>
	\$	\$
Adult (21 and over) or married minor or unmarried minor with no parent in Australia . . . .	20.00	6.00
Unmarried person, aged 16-20 years . . . .	13.00	3.00

Additional benefit for dependants continues at the same rate as ordinary sickness benefit and a supplementary allowance of up to \$4.00 a week may be paid to beneficiaries if they pay rent or pay for board and lodging or for lodging.

The weekly rate of benefit is reduced by the amount by which a beneficiary's other income exceeds the amount of permissible income. For unemployment benefit purposes the income of the spouse is also taken into account unless the claimant and his spouse are permanently separated. For sickness benefit purposes the income from an approved friendly society, or other similar approved body, in respect of the incapacity for which sickness benefit is payable is disregarded. 'Income' does not include child endowment or other payments for children, Commonwealth health benefits and payments from registered benefit organisations, a tuberculosis allowance, or an amount paid in reimbursement of medical, dental or similar expenses. The supplementary allowance is reduced by the amount by which a beneficiary's other income exceeds \$1.00 a week.

The amount of compensation, damages or similar payment, or war pension, if paid in respect of the same incapacity as that for which sickness benefit is claimed, is deducted from the sickness benefit. If not paid in respect of the same incapacity, compensation is regarded as income and war pension is ignored.

There is a waiting period of seven days during which unemployment or sickness benefit is not payable, but this waiting period is not required more than once in any period of thirteen weeks.

### Special benefit

A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not receiving an age, invalid or widow's pension, a service pension or a tuberculosis allowance and who, because of age, physical or mental disability or domestic circumstances, or for any other reason, is unable to earn a sufficient livelihood for himself and his dependants. Recipients of special benefits include, among others, persons caring for invalid parents, and persons ineligible for age, invalid or widow's pensions because of lack of residence qualifications.

Special benefits are also paid to immigrants who are in Commonwealth centres or hostels awaiting their first placement in employment in Australia. During this time they receive a short instruction in English and in Australian conditions to facilitate their assimilation into the community and employment.

No means test or residence requirement is laid down but there is an overriding requirement that a person must be suffering hardship to be granted a special benefit.

The maximum rate of special benefit is the same as for unemployment benefit.

### UNEMPLOYMENT, SICKNESS, AND SPECIAL BENEFITS STATES AND TERRITORIES, 1971-72(a)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Number admitted to benefit during year—									
Unemployment—									
Males . . . . .	56,632	48,564	31,599	22,073	27,025	6,279	788	757	193,717
Females . . . . .	18,172	14,326	11,492	8,235	6,334	2,695	128	318	61,700
Persons . . . . .	74,804	62,890	43,091	30,308	33,359	8,974	916	1,075	255,417
Sickness—									
Males . . . . .	24,392	16,805	10,882	5,843	5,757	2,459	420	342	66,900
Females . . . . .	6,644	4,528	2,363	1,482	1,271	505	64	122	16,979
Persons . . . . .	31,036	21,333	13,245	7,325	7,028	2,964	484	464	83,879
Special—									
Ordinary—									
Males . . . . .	644	197	215	72	72	37	2	4	1,243
Females(b) . . . . .	4,957	2,883	2,000	949	870	381	62	102	12,204
Persons . . . . .	5,601	3,080	2,215	1,021	942	418	64	106	13,447
Immigrants—									
Persons . . . . .	3,621	159	368	550	2	..	..	..	4,700
Total—									
Males(c) . . . . .	81,668	65,566	42,696	27,988	32,854	8,775	1,210	1,103	261,860
Females(c) . . . . .	29,773	21,737	15,855	10,666	8,475	3,581	254	542	90,883
Persons(d) . . . . .	115,062	87,462	58,919	39,204	41,331	12,356	1,464	1,645	357,443
Persons on benefit at end of year—									
Unemployment—									
Males . . . . .	9,331	8,176	3,354	3,528	4,836	1,087	24	56	30,392
Females . . . . .	3,929	2,738	1,528	1,363	987	610	2	32	11,189
Persons . . . . .	13,260	10,914	4,882	4,891	5,823	1,697	26	88	41,581
Sickness—									
Males . . . . .	4,341	2,954	1,597	928	738	339	24	25	10,946
Females . . . . .	1,096	790	378	305	217	89	3	3	2,881
Persons . . . . .	5,437	3,744	1,975	1,233	955	428	27	28	13,827
Special—									
Ordinary—									
Males . . . . .	193	54	36	11	27	5	1	3	330
Females(b) . . . . .	1,419	985	788	255	252	133	17	18	3,867
Persons . . . . .	1,612	1,039	824	266	279	138	18	21	4,197
Immigrants—									
Persons . . . . .	117	..	4	13	..	..	..	..	134
Total—									
Males(c) . . . . .	13,865	11,184	4,987	4,467	5,601	1,431	49	84	41,668
Females(c) . . . . .	6,444	4,513	2,694	1,923	1,456	832	22	53	17,937
Persons(d) . . . . .	20,426	15,697	7,685	6,403	7,057	2,263	71	137	59,739
Benefits paid during year—									
Unemployment . . . \$'000	7,949	6,721	4,352	2,930	2,945	966	73	60	25,997
Sickness . . . \$'000	6,243	4,435	2,166	1,243	1,159	497	63	100	15,906
Special(d) . . . \$'000	1,214	643	470	220	194	79	18	14	2,851
Total benefits paid . . \$'000	15,406	11,799	6,988	4,393	4,297	1,542	154	174	44,754

(a) Excludes a small number of persons receiving unemployment benefits in outlying areas. (b) Since June 1968, special benefits, instead of sickness or unemployment benefits, became payable for confinement cases. (c) Excludes immigrants in Commonwealth centres or hostels awaiting their first placement in employment in Australia. (d) Includes immigrants in the category described in footnote (c).

**UNEMPLOYMENT, SICKNESS, AND SPECIAL BENEFITS: SUMMARY, AUSTRALIA  
1966-67 TO 1971-72**

Year	Number admitted to benefit during year			Average number of persons on benefit at end of each week			Amount paid in benefits		
	Unemployment	Sickness	Special (a)	Unemployment	Sickness	Special (a)	Unemployment	Sickness	Special (a)
1966-67	151,024	72,276	9,340	20,650	10,108	2,413	\$'000 11,186	\$'000 6,611	\$'000 1,247
1967-68	158,133	72,924	11,615	21,543	9,935	2,532	11,242	6,290	1,300
1968-69	132,914	63,024	(b)21,928	17,818	8,407	(b)4,307	9,268	5,531	(b)2,031
1969-70	109,383	66,766	23,129	13,212	8,572	4,445	8,868	7,146	2,578
1970-71	137,963	73,601	22,982	14,979	9,524	4,293	10,795	10,262	2,420
1971-72	255,417	83,879	18,147	29,110	11,927	3,968	25,997	15,906	2,851

(a) Includes immigrants in Commonwealth centres or hostels awaiting their first placement in employment in Australia.

(b) Since June 1968, special benefits instead of sickness or unemployment benefits, became payable for confinement cases.

### Sheltered employment allowance

This allowance was introduced on 30 June 1967 as an alternative to an invalid pension. It is available to disabled employees engaged in approved sheltered employment who have been receiving invalid pension or are likely to become medically qualified for such pension if not provided with sheltered employment.

The maximum rate of the allowance is the same as the maximum rate of invalid pension. Additional benefits such as wife's pension and additional pension for children that would be paid if the person were an invalid pensioner are added to the sheltered employment allowance to form one composite payment. The means test is the same as for invalid pensions.

In the year ended 30 June 1972, one workshop was approved under the *Social Services Act 1947-1972* to pay sheltered employment allowances on behalf of the Department of Social Security. At 30 June 1972 thirteen workshops were paying the allowances to 923 disabled employees. Employees in other sheltered workshops continued to receive invalid pensions. Expenditure during the year 1971-72 was \$741,637.

### Commonwealth Rehabilitation Service

The Commonwealth Rehabilitation Service was set up to help persons who are unable to work because of physical handicap, or who have had to give up their employment because of sickness or injury. It helps disabled persons to reach their maximum physical fitness and to prepare for suitable employment. They are given suitable treatment and training, the cases selected being those in which the person's disability is remediable and there are reasonable prospects of his engaging in a suitable vocation within three years after the commencement of treatment or training.

The service is available to invalid and widow pensioners, persons receiving unemployment, sickness or special benefits, national servicemen who are disabled at time of discharge but are ineligible for rehabilitation assistance from the Repatriation Department, persons receiving tuberculosis allowances, and persons aged fourteen or fifteen who, without treatment and training, would be likely to qualify for an invalid pension on reaching the age of sixteen years. During treatment, payment of pension or benefit continues. When vocational training begins the pension or benefit is suspended and a rehabilitation allowance, together with a training allowance of \$4.00 a week, is paid instead. With an invalid pensioner, or a sickness, unemployment, or special beneficiary, the rehabilitation allowance is equivalent to and calculated in the same manner as an invalid pension. For a widow pensioner the rate is the same as that of the widow's pension.

Living-away-from-home allowances are paid where necessary. Fares and living expenses (including those of an attendant where required) incurred in connection with treatment, training or attendance for an interview or for medical examination may also be paid. Necessary artificial replacements, surgical aids and appliances may be provided, free of charge, to a person receiving treatment and training or who needs them to assist him to engage in a suitable vocation after the discontinuance of his treatment and training or who needs them otherwise to assist in his rehabilitation. He may also be provided with books, equipment and tools of trade costing up to \$80 in any period of twelve months. Where books, equipment and tools of trade provided to assist a person to engage in a suitable vocation are retained by him, he is liable to repay the cost but is not required to make repayment until after he has commenced employment. The repayment may be made by instalments. If the treatment or vocational training does not result in the trainee being able to engage in employment, he receives the pension or benefit to which he is entitled.

People who become disabled while working for the Commonwealth Government and who are covered by the Compensation (Commonwealth Employees) Act also qualify for a rehabilitation service. Disabled persons who cannot qualify for the free service may pay for rehabilitation themselves or they may be sponsored by State Government or private organisations.



*Numbers dealt with by the service***COMMONWEALTH REHABILITATION SERVICE: AUSTRALIA, 1971-72**

Class of beneficiary	Referred	Accepted	Completed training	Placed in employment		Expenditure during year \$'000
				After training	Without training	
Invalid pensioners . . . . .	(a)5,712	344	116	104	165	n.a.
Widow pensioners . . . . .	13	3	..	..	..	
Unemployment and sickness beneficiaries . . . . .	20,426	1,103	213	188	589	
Special beneficiaries . . . . .	15	1	..	2	..	
Recipients of tuberculosis allowances	7	5	6	3	3	
Persons whose rehabilitation is continued under Section 135P of the Social Services Act(b) . . . . .	2	2	..	..	1	
Persons provided with rehabilitation under Section 135S of the Social Services Act(c) . . . . .	214	155	12	20	125	
Persons aged 14-15 years . . . . .	155	59	23	23	31	
<b>Total . . . . .</b>	<b>26,544</b>	<b>1,672</b>	<b>370</b>	<b>340</b>	<b>914</b>	<b>3,945</b>

(a) Does not include applicants for invalid pension where pension eligibility is not determined; there were 6,605 cases in 1971-72. (b) Persons receiving invalid pensions, etc., when accepted for rehabilitation and who, on becoming ineligible for the pension, etc., are provided with rehabilitation on payment of the cost. (c) Persons provided with rehabilitation on payment of the cost by another authority.

Of the 1,672 persons accepted during 1971-72, 76 per cent were under forty years of age. The average number undergoing rehabilitation at the end of each month during the year was 1,117.

**Training scheme for widow pensioners**

In September 1968 a scheme was introduced to help widow pensioners acquire vocational skills which will enable them to undertake gainful employment. Training may take the form of refresher courses or it may involve training for new skills. During training the widow continues to receive her pension for as long as she remains eligible. In addition to pension, she may qualify for a training allowance of \$4 a week and a living-away-from-home allowance of \$5 a week. The cost of tuition fees and fares may also be met; and books, equipment, appliances and tools of trade necessary during training may be supplied free of charge up to the value of \$80 in any period of twelve months. A loan of up to \$400 is available in certain circumstances to enable equipment to be purchased for employment at home. Of the 2,300 applications received during 1971-72, 1,702 were accepted for training and of this number 1,512 commenced training. During the year 1,390 completed training and 862 were placed in employment. Expenditure during the year was \$656,195.

**Commonwealth assistance to welfare organisations**

*The Aged Persons Homes Act 1954-1972* is designed to encourage the provision of homes in which aged persons may reside in conditions approaching normal domestic life.

To be eligible for assistance under the Act an organisation must be:

- (a) carried on otherwise than for the purposes of profit or gain to the individual members; and
- (b) a religious organisation, an organisation of which the principal objects or purposes are charitable or benevolent, an organisation of former members of the defence forces established in every State or a State branch of such an organisation, an organisation approved by the Governor-General for the purposes of the Act, or a local governing body.

An organisation conducted or controlled by, or by persons appointed by, the Government of the Commonwealth or of a State is not eligible for assistance under the Act.

The Director-General of the Department of Social Security may make a grant of money to an organisation as assistance towards meeting the cost of the construction or purchase of a home, including land, to be used permanently for the accommodation of aged persons. The grant is made on a basis of \$2 for each \$1 raised by the organisation (\$1 for each \$1 from 1954 to 1957), not counting money which the organisation received from a governmental body (other than a local governing body) or borrowed.

Before a grant is made the Director-General must be satisfied that the sum of the money expended and the money at present available for expenditure by the organisation towards the capital cost of the home, together with the amount of the grant, will be not less than the capital cost of the home.

The following table gives information regarding grants approved during 1971-72. The amounts granted include new grants approved in 1971-72 together with adjustments made during the year in respect of grants originally approved in earlier years.

**AGED PERSONS HOMES: GRANTS AND AMOUNTS APPROVED, AND BEDS PROVIDED, STATES AND TERRITORIES, 1971-72**

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
Grants approved	No.	66	55	38	35	31	14	2	..	241
Amounts	\$'000	9,749	4,664	2,867	2,889	3,001	486	136	..	23,792
Beds provided	No.	1,838	943	619	579	657	101	23	..	4,760

The following table gives information regarding grants approved for each of the years 1967-68 to 1971-72. The amounts granted in each year include new grants approved in that year together with adjustments made during the year in respect of grants originally approved in earlier years.

**AGED PERSONS HOMES: GRANTS AND AMOUNTS APPROVED, AND BEDS PROVIDED  
AUSTRALIA 1967-68 TO 1971-72**

Year	Grants approved		Beds provided
	Number	Amount (\$'000)	Number
1967-68	170	10,220	2,831
1968-69	193	12,704	3,342
1969-70	184	13,576	3,305
1970-71	235	18,972	4,136
1971-72	241	23,792	4,760

Since the commencement of the Act in December 1954, 2,511 grants amounting to \$148,762,411 have been approved, and accommodation has been provided for 44,818 aged persons.

The Aged Persons Homes Act also provides a *personal care subsidy* of \$10 a week for persons of eighty years of age or over who receive approved personal care while living in hostel type accommodation provided by organisations eligible under the Aged Persons Homes Act. The following table gives details of the premises approved, payments made and number of residents aged eighty years or over residing in the approved premises, at 30 June 1972.

**AGED PERSONS HOMES GRANTS, PERSONAL CARE SUBSIDY: STATES, 30 JUNE 1972**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number of approved premises	88	103	64	52	32	19	1	1	360
Number of qualified residents	1,549	2,094	1,278	1,035	441	260	3	5	6,665
Subsidy paid	\$ 449,840	525,000	359,380	284,840	143,780	65,320	740	680	1,829,580

The *Sheltered Employment (Assistance) Act* 1967-1970 superseded the *Disabled Persons Accommodation Act* 1963. Under the latter Act, which was in operation from 25 November 1963 to 30 June 1967, total grants of \$372,118 had been approved. The new Act, which came into operation on 30 June 1967 and was amended on 26 October 1970, provides for subsidies of \$2 for \$1 to eligible organisations towards the capital cost of sheltered workshops, the equipment for them, and accommodation for disabled people employed in sheltered workshops or in normal industry. The Act covers

the erection of buildings and the purchase of existing buildings. In both cases the cost of land is included in the capital cost as is the cost of any necessary conversion or extension of an existing building. The subsidy may also be paid towards the rental, for up to three years, where rented premises are used to provide sheltered employment. A training fee of \$500 is payable to sheltered workshop organisations in respect of each handicapped person who enters and remains in normal employment for twelve months following a period of at least six months training provided by the organisation. In addition, a subsidy of up to \$1 for \$1 is payable towards the salaries of certain sheltered workshop accommodation unit staff (such as supervisory staff, doctors, social workers and counsellors). Organisations eligible for grants under the Act are the same as those specified under the Aged Persons Homes Act.

A substantial number of the people employed in the sheltered workshop must be medically qualified for an invalid pension, or be likely to become so qualified if not provided with sheltered employment, and must receive payment for their work before the organisation can qualify for assistance under the Act.

During 1971-72 training fees were approved in respect of 72 handicapped workers who had graduated to open employment, at a cost of \$36,000, while a total of 1,037 approved staff positions received salary subsidy amounting to \$755,245.

The following table gives details of capital grants approved during the last financial year in each State and compares these figures with the situation obtaining throughout Australia for each of the preceding four years.

**SHELTERED EMPLOYMENT (ASSISTANCE) ACT: CAPITAL GRANTS APPROVED  
1971-72**

State	<i>Capital Grants approved for:</i>									
	<i>Workshop premises</i>		<i>Workshop equipment</i>		<i>Workshop rental</i>		<i>Residential units</i>		<i>Total</i>	
	<i>No. of grants</i>	<i>Amount approved</i>	<i>No. of grants</i>	<i>Amount approved</i>	<i>No. of grants</i>	<i>Amount approved</i>	<i>No. of grants</i>	<i>Amount approved</i>	<i>No. of grants</i>	<i>Amount approved</i>
		\$		\$		\$		\$		\$
New South Wales	33	1,426,161	238	177,665	11	33,432	8	635,485	290	2,272,743
Victoria	5	99,910	49	62,354	3	1,328	2	229,206	59	392,798
Queensland	10	129,042	84	104,323	3	7,509	3	195,143	100	436,017
South Australia	12	323,269	68	55,745	2	3,293	1	240,003	83	622,310
Western Australia	5	144,027	47	42,835	3	4,185	5	277,593	60	468,640
Tasmania	6	27,521	40	37,325	..	..	1	5,614	47	70,460
Total	71	2,149,930	526	480,247	22	49,747	20	1,583,044	639	4,262,468
Total—										
1970-71	61	968,461	526	407,945	14	19,978	5	216,860	606	1,613,244
1969-70	36	901,924	295	361,662	24	57,543	4	162,088	359	1,483,217
1968-69	34	1,169,074	198	253,798	14	27,654	3	346,639	249	(a)1,797,165
1967-68	24	1,203,249	65	124,530	9	18,176	5	398,634	103	(a)1,744,589

(a) Includes adjustment to grants originally approved under the Disabled Persons Accommodation Act.

The *Handicapped Children (Assistance) Act* 1970 came into operation on 17 June 1970. The Act provides for subsidies of \$2 for \$1 to be paid to eligible organisations towards the capital cost of premises to be used for the training of handicapped children; the cost of equipment for such training; and the capital cost of residential accommodation for handicapped children receiving training. Organisations eligible for grants under the Act are the same as those specified under the Aged Persons Homes Act. At 30 June 1972 the subsidy had been extended to 92 premises to be used for training purposes and to 24 residential centres. The total amount approved under the Act by way of grants towards the cost of training centres, residential units and training equipment was \$3,354,658.

The *Delivered Meals Subsidy Act* 1970 came into operation on 15 April 1970. Its purpose is to help organisations to establish, maintain, expand and improve 'meals-on-wheels' services. The subsidy is at the rate of \$1.50 for every ten meals provided by approved organisations. At 30 June 1972, 316 organisations had received a total subsidy of \$874,098 under the Act. Organisations eligible for grants under the Act are the same as those specified under the Aged Persons Homes Act.

#### Commonwealth assistance to States

The *States Grants (Deserted) Wives Act* 1968 came into operation on 21 June 1968 with retrospective effect from 1 January 1968. The Act provides for assistance to be given by the Commonwealth to the States in respect of aid for needy mothers with children where there is no bread-winner and the mothers are not eligible for benefits under the Social Services Act. Broadly, these include deserted wives during the first six months of desertion, wives during the first six months of the husband's imprisonment, deserted de facto wives, de facto wives of prisoners, and unmarried mothers.



The type of assistance attracting a Commonwealth grant may be provided in the form of cash, food or clothing. The grant is made by the Commonwealth to the States on the basis of half the cost of the approved assistance paid to the mother or half the amount of Class 'A' widow's pension, which would have been payable had she been qualified to receive it, whichever is the lesser.

All States are now receiving assistance under the scheme. In 1971-72 payments by the Commonwealth amounted to \$5,876,257 compared with \$3,691,217 during 1970-71.

The *States Grants (Home Care) Act* 1969 provides that the Commonwealth will share with participating States on a \$1 for \$1 basis, the cost of developing approved housekeeping or other domestic assistance provided wholly or mainly for aged persons in their homes. The Commonwealth will also share on a \$1 for \$1 basis with participating States up to a maximum of one-third of the capital cost of approved senior citizens' centres as well as meeting on a \$1 for \$1 basis with the States the cost of a salary of a welfare officer employed by such a centre. All States participate in this scheme.

The following table shows the total payments made to the States to 30 June 1972.

PAYMENTS TO STATES FOR HOME CARE, SENIOR CITIZENS' CENTRES, AND WELFARE OFFICERS TO 30 JUNE 1972  
(\$)

State	Home Care Services	Senior Citizens' Centres	Welfare Officers	Total
New South Wales	395,150	73,208	2,158	470,516
Victoria	137,000	11,184	..	148,184
Queensland	269,931	107,970	519	378,420
South Australia	9,471	135,228	12,471	157,170
Western Australia	13,500	30,244	..	43,744
Tasmania	14,886	10,803	..	25,689
<b>Total</b>	<b>839,938</b>	<b>368,637</b>	<b>15,148</b>	<b>1,223,723</b>

The *States Grants (Dwellings for Aged Pensioners) Act* 1969 enables the Commonwealth to make grants, amounting to \$25,000,000 over a five-year period commencing from 1 July 1969, to the States for the purpose of carrying out approved building schemes in connection with the provision of self-contained accommodation for single aged pensioners with little means.

DWELLINGS FOR AGED PENSIONERS: ASSISTANCE TO STATES  
1971-72  
(\$)

State	Grants paid in 1971-72	Total grants paid to 30.6.72	Maximum amount payable under the Act
New South Wales	3,260,000	5,498,972	10,750,000
Victoria	2,242,772	4,372,247	6,500,000
Queensland	660,652	769,206	3,350,000
South Australia	1,002,591	1,473,291	2,000,000
Western Australia	224,555	924,555	1,750,000
Tasmania	231,800	490,000	650,000
<b>Total</b>	<b>7,622,370</b>	<b>13,528,271</b>	<b>25,000,000</b>

#### Telephone rental concessions

Effective from 1 October 1964 an amendment to the Telephone Regulations of the Post and Telegraph Act provided that a telephone service for blind persons and for qualified age, invalid and widow pensioners is available at an annual rental equal to two-thirds of the amount otherwise payable. The Department of Social Security re-imburses the Postmaster-General's Department for the cost of the scheme including administrative costs. Expenditure during 1971-72 was \$3,805,651, plus administrative costs amounting to \$107,069.

**Compassionate allowances**

These allowances are paid by the Commonwealth on a discretionary basis to certain people who are unable to qualify for pensions or other benefits under the provisions of the Social Services Act. Expenditure on compassionate allowances and payments of a similar nature during 1971-72 was \$60,387.

**Northern Territory and Australian Capital Territory welfare services**

Provision of general welfare services in these two Territories is the responsibility of the Commonwealth. In so far as welfare items can be identified for territorial accounting purposes, the following table shows the cost of providing these services for each of the years 1967-68 to 1971-72.

**COMMONWEALTH EXPENDITURE ON GENERAL WELFARE SERVICES<sup>(a)</sup>**  
**NORTHERN TERRITORY AND AUSTRALIAN CAPITAL TERRITORY**  
**1967-68 TO 1971-72**  
**(\$'000)**

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Northern Territory—</b>					
Current outlay . . . . .	4,941	5,536	8,207	8,094	8,490
<b>Capital outlay—</b>					
Gross capital formation (b) . . . . .	166	755	510	788	576
<b>Total outlay . . . . .</b>	<b>5,107</b>	<b>6,291</b>	<b>8,717</b>	<b>8,882</b>	<b>9,066</b>
<b>Australian Capital Territory—</b>					
Current outlay . . . . .	323	485	304	396	634
<b>Capital outlay—</b>					
Gross capital formation (b) . . . . .	..	..	..	..	..
<b>Total outlay . . . . .</b>	<b>323</b>	<b>485</b>	<b>304</b>	<b>396</b>	<b>634</b>

(a) Includes expenditure on aboriginal affairs.

(b) Expenditure on fixed assets and increase in stocks.

**Aboriginal welfare**

The Aboriginal population as defined at the 1971 Census of Population and Housing includes persons who, at the Census, stated themselves to be of Aboriginal origin. Persons of mixed descent were invited to indicate the race with which they identified. The number enumerated at the 1971 Census was 106,288 persons. In addition, 9,663 persons identified themselves as Torres Strait Islanders, making a total of 115,951.

The Aboriginal population is increasing at a rate faster than the Australian average. Few Aborigines still live a nomadic life; many live a settled, but in many other ways, traditional life. There are others at all stages between this and full participation in the life of the Australian community.

A referendum in May 1967 led to the repeal of Section 127 of the Constitution which provided that in reckoning the numbers for census purposes, Aborigines should not be counted; and to the deletion of the words 'other than the Aboriginal race in any State' from Section 51 (xxvi) which relates to the power of the Commonwealth Parliament to make laws with respect to people of any race. The Federal Government, whose aim is to help the Aborigines to become an integral part of Australian community life, while at the same time preserving and developing their own distinctive culture, languages, traditions and arts, now shares with the States power and responsibilities for the advancement of Aborigines. The Commonwealth Government has created a Department of Aboriginal Affairs, in Canberra, as the agency co-ordinating national policies affecting Aborigines and responsible also for Aboriginal affairs in the Northern Territory. The Department also serves the Council for Aboriginal Affairs, comprising a Chairman and two members, which advises on the framing of national policies for the Aboriginal citizens of Australia.

In recent years the Commonwealth, State and Northern Territory legislatures have been active in progressively removing all discriminatory legislation from the relevant Acts of the Commonwealth and State Parliaments and from the relevant Ordinances of the Northern Territory. In the legal and formal sense none of the opportunities open to Australians generally is closed to Aborigines. However

the States continue to maintain a number of programs specifically for Aboriginal welfare and development, and since the establishment of the Office (now Department) of Aboriginal Affairs in 1968, the Commonwealth Government has increased its involvement. Outlays by Commonwealth authorities which have been identified as specifically relating to Aboriginal advancement are shown for 1968-69 to 1971-72 in the following table.

**OUTLAY ON ABORIGINAL ADVANCEMENT BY COMMONWEALTH AUTHORITIES**  
**1968-69 TO 1971-72**  
 (\$'000)

	1968-69	1969-70	1970-71	1971-72
<b>Net current expenditure on goods and services (including grants to private non-profit organisations)—</b>				
Education . . . . .	1,732	1,980	2,964	3,524
Health . . . . .	418	421	393	600
Welfare . . . . .	5,665	8,489	8,855	9,824
Housing . . . . .	55	64	154	70
Other . . . . .	298	375	537	546
<i>Total</i> . . . . .	<i>8,168</i>	<i>11,329</i>	<i>12,903</i>	<i>14,564</i>
<b>Gross capital formation—</b>				
Education . . . . .	252	2,610	851	632
Health . . . . .	153	39	104	7
Welfare . . . . .	755	509	706	1,284
Housing . . . . .	3	197	895	517
Other . . . . .	58	55	57	50
<i>Total</i> . . . . .	<i>1,221</i>	<i>3,410</i>	<i>2,613</i>	<i>2,490</i>
Cash benefits to persons . . . . .	62	735	2,622	3,201
Grants for private capital purposes . . . . .	938	1,583	2,049	2,156
Advances to the private sector . . . . .	24	417	725	614
<b>Commonwealth grants—</b>				
<b>Current—</b>				
Education . . . . .	151	289	273	347
Health . . . . .	162	162	290	584
Welfare . . . . .	6	146	237	734
<b>Capital—</b>				
Education . . . . .	656	655	672	867
Health . . . . .	348	474	353	734
Welfare . . . . .	125	140	354	734
Housing . . . . .	2,202	3,545	4,821	5,200
Commonwealth advances . . . . .	..	350	..	-59
<i>Total outlay</i> . . . . .	<i>14,063</i>	<i>23,234</i>	<i>27,912</i>	<i>32,166</i>

### State expenditure on certain welfare services

The following table shows net expenditure from State government funds on certain welfare services. The figures exclude expenditure on unemployment, bush fire, flood, etc., relief, Aboriginal welfare, and some other items which are excluded because information cannot be obtained for all States. Loan fund expenditure is excluded also. Because of differences in organisation and accounting methods, the information shown for both items is not on exactly the same basis for all States; it may also be incomplete because particulars of some activities are not separately recorded and are therefore excluded. The expenditure shown is 'net' in the sense that receipts for services rendered have been deducted from gross expenditure.



**NET EXPENDITURE BY STATE GOVERNMENTS ON CERTAIN WELFARE  
SERVICES, 1967-68 TO 1971-72**  
(\$'000)

<i>Service and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
1971-72—							
Relief of aged, indigent and infirm, child welfare, etc.	33,690	23,312	12,482	8,995	12,742	3,154	94,375
Miners' phthisis	55	44	..	..	82	..	181
<b>Total</b>	<b>33,745</b>	<b>23,356</b>	<b>12,482</b>	<b>8,995</b>	<b>12,824</b>	<b>3,154</b>	<b>94,556</b>
Total—							
1970-71.	25,169	18,226	10,318	6,784	10,306	2,876	73,680
1969-70.	21,445	14,547	9,730	5,768	8,805	1,966	62,260
1968-69.	20,185	13,139	9,258	5,268	7,484	2,228	57,562
1967-68.	17,945	11,674	8,399	4,861	6,591	2,188	51,658

### Surveys by the Commonwealth Department of Social Security

#### Survey of age, invalid and widow pensioners in New South Wales and Victoria, March 1971

Details of the survey of the characteristics of age, invalid and widow pensioners in New South Wales and Victoria, covering approximately two-thirds of all such pensioners in Australia, carried out by the then Commonwealth Department of Social Services in March 1971, are shown in Year Book No. 58, pages 411-15.

#### Morbidity surveys of invalid pensioners in New South Wales and Victoria

Details of the two separate surveys of the major disabilities of invalid pensioners in New South Wales and Victoria undertaken during 1970 by the then Commonwealth Department of Social Services are shown in Year Book No. 58, pages 415-16.

#### Morbidity survey of new invalid pensioners

A survey of the major causes of disabilities of new invalid pensioners was undertaken in Queensland, South Australia, Western Australia and Tasmania during the year 1972-73 by the then Commonwealth Department of Social Services. The table below classifies persons granted invalid pension according to age and major cause of disability.

#### NEW GRANTS OF INVALID PENSIONS: MAJOR CAUSE OF DISABILITY BY FIVE YEAR AGE GROUPS JULY TO DECEMBER 1971

#### QUEENSLAND, SOUTH AUSTRALIA, WESTERN AUSTRALIA AND TASMANIA COMBINED

	Age groups										Total		
Major cause of disability(a)	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 and over	Number	Per cent
Infective and parasitic diseases . . . . .	11	3	3	2	7	7	9	13	8	3	2	68	1.5
Neoplasms . . . . .	12	10	4	8	8	14	29	37	53	63	1	239	5.4
Endocrine, nutritional and metabolic diseases . . . . .	4	3	3	6	4	10	18	21	24	13	2	108	2.4
Diseases of the blood and blood-forming organs . . . . .	1	1	..	..	..	..	3	2	2	..	..	9	0.2
Mental disorders . . . . .	222	61	65	49	66	95	150	140	127	57	3	1,035	23.4
Diseases of the nervous system and sense organs . . . . .	89	22	18	26	24	24	29	52	63	38	10	395	8.9
Diseases of the circulatory system . . . . .	2	5	1	12	7	37	107	182	372	318	19	1,062	24.0
Diseases of the respiratory system . . . . .	6	1	2	6	8	19	41	49	115	108	6	361	8.2
Diseases of the digestive system(b) . . . . .	..	1	5	4	2	9	13	19	40	20	2	115	2.6
Diseases of the genito-urinary system . . . . .	4	2	3	3	1	3	8	11	18	4	..	57	1.3
Diseases of the skin and sub-cutaneous tissue . . . . .	..	..	1	..	..	2	2	3	2	1	1	12	0.3
Diseases of the musculoskeletal system and connective tissue . . . . .	1	2	5	2	11	25	57	107	240	133	15	598	13.5
Congenital anomalies . . . . .	37	5	3	4	6	5	7	4	8	2	..	81	1.8
Symptoms, ill-defined conditions and other diseases n.e.i. . . . .	10	5	4	3	10	5	13	11	42	20	6	129	2.9
Accidents, poisoning and violence . . . . .	16	14	7	6	14	8	21	24	27	20	1	158	3.6
All causes . . . . .	415	135	124	131	168	263	507	675	1,141	800	68	4,427	100.0

(a) Causes of invalidity have been classified according to the eighth (1965) revision of the World Health Organisation's International Classification of Diseases. (b) Excluding diseases of oral cavity, salivary glands, and jaws.

**Social service pensioners receiving war pension**

A survey of social service pensioners in New South Wales and Victoria receiving Repatriation war pension was carried out by the then Commonwealth Department of Social Services at 30 June 1971. Estimates based on the results obtained from the survey indicate that nearly 69,000 social service pensioners in Australia (i.e. about 6.6 per cent of the total) were also in receipt of war pension at the end of June 1971.

The tables below show the age, invalid and widow pensioners classified by means as assessed and the rate of war pension. When evaluating the tables it should be noted that the war pension is included in income when calculating a pensioner's 'means as assessed'.

**SOCIAL SERVICE AGE PENSIONERS RECEIVING WAR PENSION  
AUSTRALIA, JUNE 1971**

**RATE OF WAR PENSION BY MEANS AS ASSESSED**

		Means as assessed (\$ per year)						
Rate of war pension (\$ per annum)		Nil	1-104	105-520	521-1,508	1,509 and over	Total	Total number
		per cent	per cent	per cent	per cent	per cent	per cent	
Less than 104	.	0.1	9.7	12.9	5.2	0.8	28.7	16,400
104 and under	208 .	..	0.3	12.7	4.2	0.5	17.7	10,100
208 "	" 312 .	..	..	6.4	7.7	0.6	14.7	8,400
312 "	" 416 .	..	..	1.2	0.5	0.1	1.8	1,000
416 "	" 520 .	..	..	0.4	0.2	..	0.7	400
520 "	" 1,040 .	..	..	0.3	1.7	0.2	2.2	1,300
1,040 "	" 1,560 .	..	..	..	27.9	4.5	32.3	18,600
1,560 and over	. .	..	..	..	1.3	0.4	1.8	1,000
Total (per cent)		0.1	10.1	34.0	48.7	7.1	100	..
Total (number)		100	5,800	19,500	27,800	4,100	57,200	57,200

**SOCIAL SERVICE INVALID PENSIONERS RECEIVING WAR PENSION  
AUSTRALIA, JUNE 1971**

**RATE OF WAR PENSION BY MEANS AS ASSESSED**

		Means as assessed (\$ per year)						
Rate of war pension (\$ per annum)		Nil	1-104	105-520	521-1,508	1,509 and over	Total	Total number
		per cent	per cent	per cent	per cent	per cent	per cent	
Less than 104	.	1.3	9.2	6.0	2.3	0.6	19.4	1,400
104 and under	208 .	1.3	1.3	12.4	2.4	0.4	17.9	1,300
208 "	" 312 .	0.3	0.3	10.6	5.4	0.2	16.8	1,200
312 "	" 416 .	0.6	0.3	4.8	1.3	0.1	7.1	500
416 "	" 520 .	0.1	0.1	1.8	0.7	0.1	2.7	200
520 "	" 1,040 .	0.3	0.2	5.0	11.1	0.4	17.0	1,200
1,040 "	" 1,560 .	0.1	..	0.1	10.1	0.8	11.1	800
1,560 and over	. .	..	..	0.1	6.3	1.5	7.9	600
Total (per cent)		4.0	11.4	40.8	39.6	4.2	100	..
Total (number)		300	800	2,900	2,800	300	7,100	7,100

**SOCIAL SERVICE WIDOW PENSIONERS RECEIVING WAR PENSION  
AUSTRALIA, JUNE 1971  
RATE OF WAR PENSION BY MEANS AS ASSESSED**

Rate of war pension (\$ per annum)	Means as assessed (\$ per year)						Total	Total number
	Nil	1-104	105-520	521-1,508	1,509 and over			
	per cent	per cent	per cent	per cent	per cent	per cent		
Less than 104 . . .	12.9	11.7	19.8	11.1	2.8	58.3	2,500	
104 and under 208 . . .	4.6	0.3	10.1	5.9	1.0	22.0	900	
208 " " 312 . . .	1.6	1.7	6.0	4.8	0.9	15.0	600	
312 " " 416 . . .	0.3	0.1	1.6	0.8	0.1	2.9	100	
416 " " 520 . . .	..	0.0	0.3	..	..	0.5		
520 " " 1,040 . . .	0.1	0.1	0.1	0.8	0.1	1.2		
1,040 " " 1,560 . . .	..	..	..	0.1	..	0.1		100
1,560 and over . . .	..	..	..	..	..	..		
<b>Total (per cent) . . .</b>	<b>19.4</b>	<b>14.0</b>	<b>38.0</b>	<b>23.6</b>	<b>4.9</b>	<b>100</b>	<b>..</b>	
<b>Total (number) . . .</b>	<b>800</b>	<b>600</b>	<b>1,600</b>	<b>1,000</b>	<b>200</b>	<b>4,300</b>	<b>4,300</b>	

**Survey of the characteristics of unemployment benefit recipients, 26 February 1972**

At the date of the survey by the then Commonwealth Department of Social Services there were 38,826 recipients of unemployment benefit (28,546 males and 10,280 females).

The following table classifies the beneficiaries of each sex by age group and duration of benefit.

**UNEMPLOYMENT BENEFICIARIES BY SEX, AGE AND DURATION OF BENEFIT: AUSTRALIA  
26 FEBRUARY 1972  
(PERCENTAGE DISTRIBUTION)**

Age group	Duration of benefit								Total
	Under 1 week	1 week and under 2 weeks	2 weeks and under 1 month	1 month and under 6 weeks	6 weeks and under 2 months	2 months and under 3 months	3 months and under 6 months	6 months and over	
MALES									
Under 18 years . . .	1.4	1.6	2.9	1.7	1.4	2.0	0.9	0.3	12.2
18-20 years . . .	2.0	2.3	3.6	1.9	1.4	1.9	1.3	0.5	14.8
21-24 years . . .	2.0	2.1	3.0	1.7	1.4	2.0	1.3	0.5	14.1
25-44 years . . .	3.7	4.3	6.6	3.4	3.7	5.3	4.3	2.4	33.6
45-54 years . . .	1.2	1.4	2.2	1.3	1.4	2.6	2.8	1.8	14.6
55 years and over . . .	0.6	0.8	1.5	0.9	1.2	1.6	2.1	1.9	10.7
Total . . .	10.9	12.5	19.8	10.9	10.4	15.5	12.6	7.5	100.0
FEMALES									
Under 18 years . . .	4.3	5.1	9.4	4.9	4.3	6.5	3.9	1.5	39.9
18-20 years . . .	3.2	3.7	6.3	3.1	2.8	3.4	3.4	2.1	28.1
21-24 years . . .	1.3	1.8	2.9	1.3	1.3	1.5	1.6	1.1	12.6
25-44 years . . .	1.1	1.6	2.2	1.1	1.1	1.1	2.1	1.7	12.2
45-54 years . . .	0.4	0.4	0.8	0.5	0.5	0.7	0.9	1.0	5.1
55 years and over . . .	0.1	0.2	0.3	0.1	0.2	0.3	0.3	0.6	2.0
Total . . .	10.5	12.7	22.0	11.0	10.1	13.5	12.2	7.9	100.0
PERSONS									
Under 18 years . . .	2.1	2.5	4.5	2.6	2.1	3.3	1.7	0.6	19.6
18-20 years . . .	2.3	2.7	4.3	2.2	1.8	2.3	1.8	0.9	18.3
21-24 years . . .	1.8	2.0	3.0	1.6	1.4	1.9	1.4	0.6	13.7
25-44 years . . .	3.0	3.6	5.4	2.8	2.9	4.2	3.8	2.2	27.9
45-54 years . . .	1.0	1.1	1.9	1.1	1.2	2.0	2.2	1.6	12.1
55 years and over . . .	0.5	0.6	1.2	0.7	0.8	1.3	1.6	1.6	8.4
Total . . .	10.8	12.6	20.3	10.9	10.3	15.0	12.5	7.6	100.0

NOTE. 'Age not stated' and 'duration of benefit not stated' have been distributed proportionately.



**ANALYSIS OF UNEMPLOYMENT BENEFIT RECIPIENTS IN AUSTRALIA  
PERCENTAGE DISTRIBUTION: FEBRUARY 1971 AND 1972**

<i>Characteristics</i>	<i>27 February 1971</i>	<i>26 February 1972</i>
<b>Sex—</b>		
Male . . . . .	68.2	73.5
Female . . . . .	31.8	26.5
<b>Age group—</b>		
Under 18 years . . . . .	20.9	19.6
18–20 years . . . . .	15.6	18.3
21–24 years . . . . .	10.6	13.7
25–44 years . . . . .	28.1	27.9
45–54 years . . . . .	13.8	12.0
55 years and over . . . . .	11.1	8.4
<b>Marital status—</b>		
Not married . . . . .	70.6	75.1
Married . . . . .	29.4	24.9
<b>Country of birth—</b>		
Australia . . . . .	83.0	74.3
Outside Australia—		
Great Britain . . . . .	6.0	8.2
Other . . . . .	8.8	15.4
Total . . . . .	14.8	23.6
Not stated . . . . .	2.1	2.1
<b>Occupation—</b>		
Rural, fishing, etc. . . . .	7.6	3.0
Professional, etc. . . . .	1.5	2.3
Administrative, etc. . . . .	24.3	25.3
Manual workers (skilled and unskilled) . . . . .	51.5	56.4
Protective service . . . . .	0.2	0.2
Other service (not private household) . . . . .	7.8	6.7
Private domestic service . . . . .	6.2	3.3
Not stated . . . . .	1.1	2.8
<b>Duration of benefit—</b>		
Under 1 week . . . . .	9.8	10.8
1 week and under 2 weeks . . . . .	11.6	12.6
2 weeks and under 1 month . . . . .	19.8	20.3
1 month and under 6 weeks . . . . .	10.5	10.9
6 weeks and under 2 months . . . . .	12.0	10.3
2 months and under 3 months . . . . .	15.2	15.0
3 months and under 6 months . . . . .	12.9	12.5
6 months and over . . . . .	8.2	7.6
<b>Total (per cent) . . . . .</b>	<b>100.0</b>	<b>100.0</b>
<b>Total (numbers) . . . . .</b>	<b>16,883</b>	<b>38,826</b>

### The role of voluntary agencies in Australian social welfare

Voluntary agencies have played an important role in the provision of social welfare services in Australia since the earliest days of settlement. The oldest voluntary organisation in Australia is the Benevolent Society of New South Wales, founded in 1818, 'to relieve the poor, the distressed, the aged and the infirm'. During the 19th century voluntary agencies were active in all States providing homes for orphan and abandoned children; industrial schools for older boys and girls often rescued from total destitution in the streets; relief in food and clothing for widows, old people and families of the unemployed; hospitals for the sick poor; and institutions for the aged and invalid.

Although in this century Commonwealth and State Governments have taken over many tasks formerly carried out by voluntary agencies, this has not led to any diminution in voluntary activity. The voluntary sector is probably more active today than it has ever been, not only carrying out its traditional role, but in opening up new fields of activity.

In caring for the aged, voluntary agencies are providing nursing home beds in 334 nursing homes. Accommodation for aged persons is provided, under the Aged Persons Homes Act, in hostels, aged persons homes and retirement villages, the great majority of which are run by voluntary agencies of various kinds.

In addition to the provision of residential care, voluntary agencies are concerned with providing many domiciliary services to enable the aged to remain independent as long as possible, and this is an area of increasing activity.

In 1972 voluntary agencies provided 3.3 million meals to aged and invalid persons in their own homes or at senior citizens centres. Home nursing services are provided in many areas together with home help services to assist the frail aged. Some voluntary agencies also operate friendly visiting services to alleviate the loneliness of the aged and to ensure that their needs are known, and others assist with services in senior citizens clubs.

The same pattern of activity is seen in services for the mentally and physically handicapped. Voluntary agencies provide day and residential schools for handicapped children, sheltered workshops for those able to undertake some employment and hostels for the handicapped in both sheltered and open employment. Many organisations provide home visiting services and occupational therapy for the home-bound, special training centres for various forms of rehabilitation, and recreational programs for those unable to participate in general community activities. The handicapped field is also noted for its activities in bringing together self help groups of the handicapped and their families to promote the well being of the handicapped and to encourage study and research into both prevention and rehabilitation.

Both the aged and handicapped services receive various forms of assistance from Governments in developing their services.

Besides the various forms of health services described above, many major hospitals are provided by the voluntary sector. Of 1,089 approved hospitals in Australia, 156 or almost 15 per cent are run by voluntary organisations. Such hospitals cover a wide range of needs and in addition provide nursing training which may ultimately be of service to the full range of hospitals and nursing homes.

Family and child welfare has long been an important area for voluntary activity. Children's homes provide for children deprived of normal home life because of serious problems within the family, in a wide variety of units ranging from the small family group home in an ordinary house in the suburbs, to the large unit of cottage homes grouped together. As with other services, recent years have shown a marked emphasis on preventive services through family welfare agencies and to greater use of substitute families in adoption and foster care programs.

Within the modern family welfare agency, assistance is given not only with money and food, as in the last century, but with marriage guidance, parental counselling and home-maker services, all designed to keep the family together as a unit. Other voluntary agencies run services for the single mother or provide day-care services to assist working mothers, in particular the one parent family or the family under special strain.

The well-being of Australian youth is also a matter of concern to the voluntary sector which runs youth activities of many varieties, offers adolescent counselling services and is showing a growing concern for the seriously emotionally disturbed and those becoming addicted to drugs.

As well as these general community services, special services for Aborigines have been a feature of voluntary activity. Formerly these were mainly concerned with the mission area but of late many agencies have been formed, often run primarily by Aborigines, to assist urban dwellers. Legal aid services, head start programs, nutrition programs and many others are now being made available through voluntary effort.

The care of immigrants is also a significant activity and again much of this work is now undertaken by settled immigrants in conjunction with longer established Australians.

Prisoners and ex-prisoners also receive their share of attention. Organisations exist to visit prisoners and assist their families. These will also assist prisoners on discharge, to re-settle in the community, either at home, in lodgings or in hostels provided by the agency. Other agencies concern themselves with alcoholics, homeless men and women and others temporarily destitute.

The list of activities by no means covers all the work done by the voluntary sector. New and experimental services such as Lifeline and Samaritans, drug contact centres, drop-in coffee houses, street workers for alienated youth and many others, are evidence of the continued ability of the voluntary sector of social welfare to develop and meet new social needs.

Another area of developing interest involves the participation of various kinds of citizen groups in social welfare services. These include Community Information Centres and Community Aid services largely manned by volunteers; groups of clients of social welfare services who provide both a service for their members and liaise with Departmental services on questions of the way service is offered to people in need; and Resident Action groups who are concerned to participate in any replanning of their neighbourhood. This area of citizen involvement can be expected to become more and more important over the next few years.

Studies of social needs and of the quality and the adequacy of present services are a continuing concern of the voluntary sector which has joined together with the statutory sector in Councils of Social Service at the State and the national level to promote the well-being of the deprived and disadvantaged sections of the community and the general social development of Australia.



## CHAPTER 14

### PUBLIC HEALTH

This chapter is concerned with the activities of the Commonwealth Department of Health, including quarantine, national health benefits, and Commonwealth grants for health purposes (the administration of hospital and medical benefits was transferred to the Department of Social Security on 20 December 1972); activities of the State health departments; statistics of hospitals and nursing homes, hansenide hospitals, and mental health institutions; statistics of notifiable diseases; and cremations. Statistics relating to causes of death are presented in Chapter 8, Vital Statistics (Pages 183-9).

Further information about the administration of public health services is contained in the annual reports of the Commonwealth Director-General of Health; the annual reports of the State health authorities; and in the Year Books and Statistical Registers published by the State offices of the Bureau of Census and Statistics. For more detailed statistics of in-patient institutions, see the Bureau of Census and Statistics annual bulletin *Hospitals and Nursing Homes* (Reference No. 16.1).

#### COMMONWEALTH GOVERNMENT ACTIVITIES

At the time of federation the only health function given to the Commonwealth Government under the Constitution was the power to make laws with respect to quarantine. Following on the passing of the *Quarantine Act* 1908 a branch of the Department of Trade and Customs, under the control of a Director of Quarantine, was created on 1 July 1909. The Commonwealth Department of Health was formed in 1921 by the extension and development of the quarantine service, the Director of Quarantine becoming the Director-General of Health. An amendment to the Constitution in 1946 gave the Commonwealth power to make laws with respect to pharmaceutical, hospital and sickness benefits, and medical and dental services. All of these matters were administered by the Department of Health until 20 December 1972 when the responsibility for hospital and medical benefits was transferred to the Department of Social Security. The Commonwealth Government also has used its powers under section 96 of the Constitution to make grants to the States for health purposes. In addition the Commonwealth Government gives financial assistance to certain organisations concerned with public health matters. A number of Commonwealth health organisations have been established; detailed information on the functions and operations of these organisations is given in Year Book No. 53, pages 561-6, and in the annual reports of the Commonwealth Director-General of Health.

#### Quarantine

The *Quarantine Act* 1908-1969 is administered by the Commonwealth Department of Health and has three sections of disease control, as follows: (i) human quarantine, which ensures that persons arriving from overseas are free of quarantinable disease; (ii) animal quarantine, which controls the importation of animals and animal products from overseas and the security of other animals present on vessels in Australian ports; and (iii) plant quarantine, which regulates the conditions of importation of all plants and plant products with the object of excluding plant diseases, insect pests and weeds.

In respect of interstate movements of animals and plants, the Act becomes operative only if the Governor-General considers that Commonwealth action is necessary for the protection of any State or States, and in general the administration of interstate movements of animals and plants is left in the hands of the States.

##### Human quarantine

With a few exceptions, which concern persons who have spent at least 14 days in areas adjacent to Australia (e.g. New Zealand, Papua New Guinea, Fiji and Lord Howe Island) all passengers and crews arriving in Australia from overseas, whether by air or sea, are subject to medical inspection for the purpose of preventing the introduction of disease into Australia. At the major ports full-time quarantine officers carry out the work, but in the minor ports local doctors act as part-time quarantine officers. Quarantine activities are controlled by the Commonwealth Directors of Health in each State who are senior medical officers of the Commonwealth Department of Health.

The main concern of the examining officers is to detect cases of the quarantinable diseases smallpox, cholera, yellow fever, plague, and typhus fever. These diseases are not endemic to Australia and it is of great importance to prevent their entry. Quarantine stations at the major ports and at Darwin and Townsville are kept ready for occupation at all times. In addition, persons arriving in Australia and suffering from infectious diseases such as chicken-pox, mumps, scarlet fever, and measles are directed to appropriate care and placed in isolation where necessary.

Valid International Certificates of Vaccination are required of travellers to Australia as follows:

*Smallpox.* All arrivals from all countries except American Samoa, Antarctic Territories, Canada, Christmas (Indian Ocean), Cocos (Keeling) and Cook Islands, Fiji, French Polynesia, Gilbert and Ellice Islands Colony (including Ocean and Fanning Islands), Lord Howe Island, Nauru, New Caledonia, New Hebrides, New Zealand, Niue and Norfolk Islands, Papua New Guinea, Solomon and Tokelau Islands, Tonga, United States of America, Western Samoa, provided travellers have not been outside these areas for at least fourteen days before arrival and that these areas are free from smallpox. Australia reserves the right, in respect of arrivals from other countries, to isolate any person who arrives by air without a smallpox vaccination certificate and refuses to be vaccinated. Children under one year of age are exempt. For passengers arriving in Australia by sea, exemption is granted to infants under twelve months of age and to persons who hold religious convictions against vaccination or who are suffering from a medical condition certified by a medical practitioner to contra-indicate smallpox vaccination.

*Cholera.* All arrivals from countries with locally infected areas. No certificate is required in respect of children under one year of age.

*Yellow fever.* All arrivals from yellow fever endemic zones.

All passengers, whether they arrive by sea or air, are required to give their intended place of residence in Australia, so that they may be traced if a case of disease occurs among the passengers on the aircraft or ship by which they travelled to Australia.

*Isolation.* Under the Quarantine Act, airline and shipping operators are responsible for the expenses of isolation of all travellers who disembark either (i) having been in a country with locally infected areas, within 5 days of arrival and not possessing a cholera vaccination certificate; or (ii) having been in an endemic zone within 6 days of arrival and not possessing a yellow fever vaccination certificate; or (iii) having arrived by air without a smallpox vaccination certificate and refusing to be vaccinated on arrival.

The numbers of cases of infectious (non-quarantinable) diseases which were discovered among the passengers and crew of overseas vessels and aircraft calling at Australian ports during 1971-72 and during the preceding four years are shown in the following tables.

**HUMAN QUARANTINE: CASES OF INFECTIOUS  
(NON-QUARANTINABLE) DISEASES ON OVERSEAS  
VESSELS AND AIRCRAFT CALLING AT  
AUSTRALIAN PORTS 1971-72**

<i>Disease</i>	<i>Total number of cases of infectious disease</i>
Chicken-pox . . . . .	33
Gastro-enteritis . . . . .	12
Glandular fever . . . . .	2
Infectious dermatitis . . . . .	1
Infectious hepatitis . . . . .	12
Influenza . . . . .	1
Measles . . . . .	44
Mumps . . . . .	24
Rubella . . . . .	32
Scarlet fever . . . . .	2
Tuberculosis . . . . .	2
Venereal disease . . . . .	312
<b>Total . . . . .</b>	<b>477</b>

**HUMAN QUARANTINE: OVERSEAS VESSELS AND AIRCRAFT ARRIVING  
IN AUSTRALIA AND CASES OF INFECTIOUS (NON-QUARANTINABLE)  
DISEASES FOUND, 1967-68 TO 1971-72**

Year	Number of overseas vessels and aircraft cleared		Number of overseas vessels and aircraft on which cases were found	Number of cases of infectious disease	
	Ships	Aircraft		Passengers	Crew
1967-68 . . .	4,440	4,968	238	312	289
1968-69 . . .	4,813	5,896	184	272	249
1969-70 . . .	5,297	6,887	n.a.	840	
1970-71 . . .	6,233	8,127	n.a.	562	
1971-72 . . .	5,872	7,895	n.a.	477	

The provisions of the State Health Acts with regard to the compulsory notification of infectious diseases and statistics of cases notified in 1972 are dealt with on pages 449-51 of this chapter.

#### Animal quarantine

Animal quarantine, authorised by the provisions of the *Quarantine Act* 1908-1969, aims at preventing the introduction or spread of animal diseases. It covers the importation of all animals, raw animal products and biological cultures associated with animal diseases, and goods associated with animals.

Of the domesticated animals, only horses, dogs and cats, are admitted from a limited number of countries depending on diseases being absent in the country of origin. All must be accompanied by health certificates which may include prescribed tests. Dogs and cats, except those from New Zealand, are subject to quarantine detention on arrival in Australia. Zoological specimens are imported into registered zoos, where they remain in permanent quarantine. Circuses are also registered if exotic species of animals are kept. In a similar manner, animals for scientific purposes are imported to approved laboratories. All these premises are kept under constant surveillance. Raw animal products such as hair, types of wool, skins, and hides are specially treated under quarantine control. Such items as raw meat, which cannot be sterilised, are admitted only from New Zealand. Other items may be treated to destroy any possible infection. Special attention is given to the importation of biological substances of animal origin. The Animal Quarantine Service is also responsible for the health certification of animals for export overseas in accordance with the requirements of the various countries.

The Division of Animal Quarantine was created in 1926. The central administration is situated within the Health Department in Canberra, with an Assistant Director-General and veterinary officers. The Principal Veterinary Officer of the Department of Agriculture in each State is appointed Chief Quarantine Officer (Animals) of that State, and members of his staff Quarantine Officers (Animals). These State officers carry out the quarantine policy formulated by the central administration. Quarantine accommodation is provided in permanent animal quarantine stations at each State capital.

The Division participates in world-wide international notifications of the more serious contagious diseases of animals and maintains a register of such diseases throughout the world. Information regarding animal diseases and parasites in Australia is also collected and disseminated by means of service publications. Consultation on technical matters is maintained with various scientific institutions. In matters of policy and the quarantine control of imports there is a close liaison with the Department of Customs and Excise.

The Division collaborates with the General and Plant Divisions of the quarantine service. Many diseases of animals are communicable to man, and for this reason animal and general quarantine administration are in some respects inseparable. Similarly the interests of animal and plant divisions overlap, many items such as insects, fodder and straw being the subject of combined control.

#### Plant quarantine

Australia is free of many of the pests and diseases of agriculture which occur in other parts of the world. Since 1 July 1909 the importation into Australia of plant materials has been subject to an increasingly stringent quarantine; some materials are admitted only under certain conditions while others are prohibited altogether. The quarantines are designed to keep out of the country any additional pests and diseases which, while not a danger in their natural habitat, may thrive in the Australian environment and, if introduced, bring about serious economic losses to Australian agriculture.



The quarantine of plants and plant material entering Australia is the responsibility of the Federal Government; the State Governments provide co-operation in the operation of the plant quarantine service. The movement of specified fruits and other plant materials within Australia is the responsibility of the State Governments.

The Commonwealth regulations governing plant quarantine apply to all plants or parts of plants, whether living or dead, and include seeds and fruits as well as timber, soil, living insects, cultures of organisms, containers, machinery, vehicles, furniture, packing materials and some foods, toys, sporting goods or tools of trade. All such goods must be declared whether they are imported as commercial consignments or as personal effects, curios, souvenirs and unprocessed food carried in luggage or on the persons of tourists, immigrants or other travellers. Heavy penalties are laid down for evasion of the regulations.

Under the *Quarantine Act* 1908-1969, quarantine inspectors are required to examine all plant material at the first port of entry and to release only material which is not considered to be a danger to agriculture or for which prior approval to import has been obtained. Any material found to be carrying diseases or pests, or suspected of doing so, may be ordered into quarantine for remedial treatment, the cost of which is met by the importer. All bamboo, cane and rattan articles are automatically fumigated. Destruction may be ordered where treatment or return to sender is impracticable, or no prior approval has been obtained, or the goods are prohibited imports.

Certain material, such as nursery stock and some seeds, may be imported only with special permission, and then in small quantities sufficient merely to establish a variety or strain. Arrangements must be made for this material to be grown in post-entry quarantine in Australia at a nursery registered by the Australian authorities. Application to import goods of this nature must be lodged in advance with the Chief Quarantine Officer (Plants) of the State Department of Agriculture in the capital city of the State of destination or with the Director of Quarantine in Canberra. Other restricted seeds or materials of plant origin for use as human or animal food or for manufacturing purposes, may have to be processed under quarantine supervision, and imports of this description also require prior approval.

Strict supervision by way of inspection and treatment, where necessary, is exercised over the timber components as well as the contents of containers and unit cargo; packing materials of straw, raw cotton, rice hulls or rice straw are prohibited imports which will be destroyed at the port of entry. Cases or cartons which have previously contained fruit or plant materials are prohibited imports, while dunnage and scantlings used in containers or cargo holds are subject to quarantine. All timber, including logs or sawn timber, is carefully inspected to ensure that it does not contain insects which could spread to forests or timber constructions.

Additional information concerning Australian plant quarantine regulations, treatments and lists of prohibitions and restrictions, may be obtained from Australian consular offices abroad, the Director of Plant Quarantine with the Commonwealth Department of Health in Canberra or from the Chief Quarantine Officer (Plants) with the respective State Departments of Agriculture in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart.

## National health benefits

### Health, cash benefits to persons and other services

For an analysis by function and economic type of expenditure by all Commonwealth authorities see Chapter 18, Public Authority Finance.

Most Commonwealth health benefits are financed through the National Welfare Fund. The following two tables show cash benefits to persons by Commonwealth authorities on a State basis for 1971-72 and for the years 1967-68 to 1971-72.

COMMONWEALTH AUTHORITIES, HEALTH: CASH BENEFITS TO PERSONS, 1971-72  
(\$'000)

	N.S.W. (a)	Vic.	Qld	S.A. (a)	W.A.	Tas.	N.T. (a)	A.C.T. (a)	Abroad	Total
Hospital benefits . . . . .	27,999	15,134	9,361	7,399	5,472	1,697	230	13	..	67,305
Hospital benefits for pensioners . . . . .	9,168	5,495	3,807	1,885	2,333	1,093	86	199	..	24,065
Nursing home benefits . . . . .	30,718	13,168	11,485	6,055	6,689	2,343	..	135	..	70,593
Medical benefits . . . . .	54,288	34,142	13,230	15,387	11,965	3,562	..	..	..	132,574
Medical benefits for pensioners . . . . .	10,268	7,218	4,517	2,968	1,835	876	11	111	..	27,804
Milk for schoolchildren . . . . .	3,649	3,493	1,862	1,060	997	504	127	153	..	11,845
Pharmaceutical benefits n.e.i. . . . .	46,862	34,410	17,125	10,098	9,094	3,080	..	594	..	121,263
Pharmaceutical benefits for pensioners . . . . .	21,530	12,577	8,368	4,749	3,324	1,457	..	..	..	52,005
Tuberculosis campaign . . . . .	2,971	3,170	1,528	715	875	337	..	1	..	9,596
Handicapped children's benefit . . . . .	167	87	37	82	41	21	3	1	..	438
Total . . . . .	207,620	128,894	71,319	50,398	42,624	14,968	458	1,206	..	517,487

(a) State totals for New South Wales and South Australia also include most of the unallocable expenditure on cash benefits to persons resident in the Australian Capital Territory and the Northern Territory respectively.

**COMMONWEALTH AUTHORITIES, HEALTH: CASH BENEFITS TO PERSONS**  
**1967-68 TO 1971-72**  
**(\$'000)**

	1967-68	1968-69	1969-70	1970-71	1971-72
Hospital benefits . . . . .	26,598	29,779	40,258	49,812	67,305
Hospital benefits for pensioners . . . . .	23,665	24,520	24,163	23,555	24,065
Nursing home benefits . . . . .	24,486	31,643	46,960	49,477	70,593
Medical benefits . . . . .	46,431	49,556	56,863	95,604	132,574
Medical benefits for pensioners . . . . .	16,116	16,912	19,224	19,898	27,804
Milk for schoolchildren . . . . .	9,831	10,053	10,051	10,160	11,845
Pharmaceutical benefits n.e.i. . . . .	73,019	81,764	95,650	115,094	121,263
Pharmaceutical benefits for pensioners . . . . .	32,115	36,609	41,069	45,181	52,005
Tuberculosis campaign . . . . .	11,266	11,460	10,554	10,597	9,596
Handicapped children's benefit . . . . .	..	76	485	456	438
<b>Total . . . . .</b>	<b>263,529</b>	<b>292,373</b>	<b>345,277</b>	<b>419,834</b>	<b>517,487</b>

Descriptions of each of the cash benefits to persons shown in the above tables are included in the following sub-sections.

**Hospital, nursing home, domiciliary nursing care and handicapped children's benefits**

*Patients in approved hospitals.* A basic principle of the provision of benefits for patients in approved hospitals is the Commonwealth support of voluntary insurance against the costs involved. Insured patients in approved hospitals receive a Commonwealth hospital benefit of \$2 per day which is paid through the contributors' registered hospital benefits organisations.

During 1971 and 1972 the hospital benefits tables were rationalised, in conjunction with the new charges adopted by the public hospitals in each State, as shown in the table, page 430. Pensioners enrolled in the Pensioner Medical Service are generally treated free of charge and, in some States, other pensioners may also be treated without charge. In addition to the following schedule registered organisations in some States operate a table to cover the cost of private hospital accommodation.

*Expenditure on hospital, nursing home, and handicapped children's benefits.* The following table shows the amount of these Commonwealth benefits paid during 1971-72. This does not include expenditure on mental hospitals (see page 439) or domiciliary nursing care which did not come into effect until 1 March 1973.

**COMMONWEALTH HOSPITAL, NURSING HOME, AND HANDICAPPED CHILDREN'S**  
**BENEFITS PAID: STATES AND TERRITORIES, 1971-72**  
**(\$'000)**

Type of patient	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Uninsured patients (80c) . . . . .	401	203	84	48	108	27	18	8	897
Insured patients (\$2)(a) . . . . .	10,169	6,358	2,235	2,634	2,223	738	(b)	(b)	24,357
Hospitalisation free of charge (\$2) . . . . .	160	150	2,561	23	22	6	213	5	3,139
Pensioner patients (\$5) . . . . .	9,168	5,495	3,807	1,885	2,333	1,093	86	199	24,065
Nursing home patients (\$2)(c) . . . . .	21,792	8,543	7,363	(d)3,964	4,268	1,608	(d)	101	47,639
Intensive care nursing home patients (\$3) . . . . .	8,926	4,625	4,122	(d)2,092	2,421	735	(d)	34	22,954
Handicapped children (\$1.50) . . . . .	167	87	37	82	41	21	3	1	438
<b>Total . . . . .</b>	<b>50,783</b>	<b>25,460</b>	<b>20,208</b>	<b>10,728</b>	<b>11,416</b>	<b>4,227</b>	<b>320</b>	<b>348</b>	<b>123,489</b>

(a) Excludes payments of \$30,986,000 towards special accounts deficits, \$518,000 towards Subsidised Health Benefits Plan management expenses and \$7,407,000 towards Subsidised Health Benefits Plan fund benefit re-imbursements.  
 (b) Members who live in the Northern Territory or the Australian Capital Territory, or who are abroad, receive their Commonwealth hospital benefit and fund benefit through membership of an organisation registered in one of the States, and payments to them are included in the respective States. (c) Increased from \$2 to \$3.50 per day from 21 October 1971.  
 (d) South Australia includes Northern Territory.

*Public hospital fees, family contribution and benefits.* The daily rates of fees charged by public hospitals, the weekly family contribution to major hospital benefits organisations and the daily rates of combined Commonwealth and hospital fund benefits paid are shown in the following table

**DAILY RATES OF FEES CHARGED BY PUBLIC HOSPITALS AND TABLES OF BENEFITS, 1973**  
(£)

<i>State or Territory</i>	<i>Date from which fees applied</i>	<i>Ward</i>	<i>Daily rates of fees</i>	<i>Weekly family contribution to major hospital funds</i>	<i>Daily rates of combined Commonwealth and fund benefits paid(a)</i>
New South Wales	1 July 1972	public	15.00	0.82	15.00
		intermediate	22.30	1.28	22.30
		private	26.30	1.52	26.30
Victoria	1 August 1971	public	15.00	0.80	15.00
		intermediate	23.00	1.30	23.00
		private	30.00	1.75	30.00
Queensland	1 January 1973	public	(b)	..	..
		intermediate	16.00	0.80	16.00
		private	19.00	0.98	19.00
South Australia(c)	1 September 1972	standard	16.00	0.92	16.00
		intermediate	21.00	1.28	21.00
		private	26.00	1.60	26.00
Western Australia	1 September 1971	standard	20.00	1.05	20.00
		private	30.00	1.65	30.00
Tasmania	1 January 1973	standard	18.00	0.70	18.00
		intermediate	24.00	1.00	24.00
		private	30.00	1.20	30.00
Northern Territory	1 April 1967	general	6.80	(d)	(d)
Australian Capital Territory	1 August 1971	general	15.00	0.82	15.00
		private	26.30	1.52	26.00

(a) Fund benefits are not paid in excess of the hospital charge. (b) No charge. (c) Not applicable to 53 country hospitals to which Part IV of the South Australian Hospitals Act applies. These hospitals are controlled by the local councils and are not subject to direction by the State Government as far as fees are concerned. The fees for these hospitals vary. (d) Covered by differing public or standard ward tables in other States.

Public hospitals in all States now charge comprehensive daily rates of fees. Separate charges are not raised for miscellaneous hospital services. In Queensland where there is no charge for public ward accommodation, contributors insured in the intermediate and private ward tables receive a fund benefit of \$4 a day if they or their dependants occupy a free public ward bed.

A Commonwealth benefit of \$2 per day is payable to hospitals for patients hospitalised free of charge.

During the waiting period of two months after joining an organisation the Commonwealth benefit is payable at the rate of 80 cents per day, unless the organisation pays fund benefits, in which case Commonwealth benefit is payable at the higher rate of \$2 per day. While a member is in arrears with his contributions and fund benefits are not payable, the Commonwealth benefit is payable at the rate of 80 cents per day.

Contributors who would have been excluded from fund benefits because of organisations' rules covering pre-existing ailments, chronic illnesses or maximum benefits are assured of hospital fund benefits by the provisions of the special account plan. Since 1 January 1969 such a contributor has been entitled to receive benefit at his full insured rate, provided total benefits do not exceed the amount of the hospital charge. Benefit is paid either from the ordinary account or from a special account guaranteed by the Commonwealth. If the payments from the special account exceed contributions credited to the account, the amount of deficit is reimbursed by the Commonwealth.

A person who joins a registered hospital benefits organisation within eight weeks of being discharged from an approved nursing home is entitled to immediate Commonwealth benefit of \$2 a day and to fund benefits without having to serve a waiting period. From 26 November 1968 persons ceasing to be entitled to the benefits of the Pensioner Medical Service who join a registered organisation within two months before or within three months after ceasing to be a pensioner are not required to serve the normal waiting period before becoming eligible for fund benefits. This new provision also enables such contributions to be transferred to the special account. If a qualified patient in an approved hospital is not insured (i.e. not a member of a hospital benefits organisation), a Commonwealth benefit of 80 cents a day is deducted from his account by the hospital. The Commonwealth subsequently reimburses the hospital. Under arrangements made under the National Health Act public hospitals generally provide free public ward treatment to pensioners enrolled in the Pensioner Medical Service who are classified as public ward patients. The Commonwealth pays the hospitals a benefit of \$5 a day for each pensioner patient. The hospital and medical insurance provisions were changed in 1969 to allow free insurance under certain circumstances and, from 1 July 1970, these provisions were extended to provide partial assistance with insurance to certain groups of persons. Details of this Subsidised Health Benefits Plan are set out on page 433.



*Patients in approved nursing homes.* By amendment to the National Health Act in 1972 new nursing home benefits were introduced with effect from 1 January 1973 (*see* (iii) and (iv) below). The benefits now available in respect of qualified nursing home patients are:

- (i) *Ordinary Care Benefit*, currently payable at the rate of \$3.50 a day, is paid in respect of all qualified nursing home patients in institutions which have been approved as nursing homes under the National Health Act.
- (ii) *Supplementary Benefit*, introduced on 1 January 1969 to provide for the payment of \$3.00 a day in respect of patients who require and receive intensive nursing home care as defined in the National Health Act. This benefit is payable in addition to the ordinary care benefit making a total of \$6.50 a day for approved patients. Both the ordinary care benefit and the supplementary benefit are paid by the Commonwealth direct to nursing home proprietors who are required to deduct such amounts from the accounts issued to patients.
- (iii) *Additional Benefit for Pensioner Patients*, introduced from 1 January 1973 in respect of patients who hold Pensioner Medical Service entitlement cards is payable direct to nursing home proprietors in the same manner as the basic Commonwealth nursing home benefits referred to above. Eligible pensioners are not required to take out health insurance coverage to receive this benefit which is payable in addition to the preceding benefits. The rates of benefit payable differ from State to State and are set out below.
- (iv) *Insurance Benefit for Non-pensioner Patients*. Patients who are not qualified pensioners for the purpose of receiving the additional pensioner benefit can receive the same rate of additional benefit but must insure with a registered hospital benefits organisation to obtain the benefit. This benefit is paid by the registered hospital benefit organisation direct to the nursing home.

The new benefits (in (iii) and (iv) above) are based on a 'patient participation' of \$2.55 a day as provided for in the National Health Act as being an amount approximating three-quarters of a single pensioner's maximum pension including the supplementary allowances payable as at 1 January 1973.

The following table shows the maximum level of new benefits which are payable in each State.

**NURSING HOME BENEFITS (NEW): MAXIMUM  
PAYMENTS: STATES, 1973**

	<i>Maximum benefits payable</i>	
	<i>Weekly</i>	<i>Daily</i>
	\$	\$
New South Wales . . . . .	10.50	1.50
Victoria . . . . .	22.40	3.20
Queensland . . . . .	10.50	1.50
South Australia . . . . .	14.00	2.00
Western Australia . . . . .	11.20	1.60
Tasmania . . . . .	10.50	1.50

Where the fees charged by a nursing home are in excess of the combined total of basic Commonwealth benefit (either \$3.50 or \$6.50 a day) plus the patient contribution (\$2.55 a day) plus additional new benefit (to maximum shown in table above), the difference must be met by the patient. Conversely, where the nursing home fee is less than this combined total, the new benefit (whether fund benefit or Commonwealth benefit for pensioners) is reduced by that amount.

*Aged patients at home.* A new domiciliary nursing care benefit became effective from 1 March 1973. In general terms it is payable, at the rate of \$14 a week, to persons who are willing and able to care, in their own homes, for aged parents or immediate relatives who would otherwise qualify for nursing home benefits. The basic criteria for the payment of the benefit are that the patient must be aged 65 years or over and be in need of continuing nursing care and receive regular visits by a registered nurse. This benefit is not subject to a means test and is payable, under the National Health Act, in addition to any entitlements that persons may have under the Social Services Act or the Repatriation Act for pensions or other supplementary allowances.

*Handicapped children in approved handicapped persons homes.* Since 1 January 1969, handicapped children who are under sixteen years of age and who are accommodated overnight in an approved handicapped persons home have been entitled to a Commonwealth benefit of \$1.50 per day. The benefit is paid direct to the approved handicapped persons home and an equivalent amount is

deducted from any charge raised by the home in respect of the handicapped child. The benefit applies to both physically and mentally handicapped children and is payable to homes conducted by charitable and religious organisations. It is not payable to homes conducted by a State Government or those conducted by a person or organisation for profit. There is no necessity for handicapped children in an approved handicapped persons home to be insured with a registered benefits organisation.

*Australians overseas.* Australian residents who receive hospital treatment in recognised hospitals in overseas countries, while temporarily absent from Australia, are eligible to receive the Commonwealth and fund benefits to which they would be entitled if the treatment were given in Australia.

*Registered hospital benefits organisations.* The following table shows the number of registered hospital benefits organisations, the membership at 30 June 1972, and fund benefits paid during 1971-72. As many persons contribute on behalf of both themselves and their dependants, the total number of persons covered by hospital insurance is considerably higher than the number of members.

HOSPITAL BENEFITS: ORGANISATIONS AND FUND BENEFITS, STATES, 1971-72

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Registered organisations at 30 June 1972(a)	34	23	8	9	7	10	91
Membership at 30 June 1972 '000	1,625	1,213	393	433	360	131	(b)4,154
Fund benefits paid(c) \$'000	81,239	56,482	14,708	21,284	17,594	5,354	(b)196,661

(a) Excludes interstate branches. (b) Members who live in the Northern Territory or the<sup>a</sup>Australian Capital Territory, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organisation registered in one of the States, and payments to them are included in the respective States. (c) Includes \$3,726,000 ancillary benefits, and also includes \$7,407,000 fund benefits reimbursed to the organisations under the Subsidised Health Benefits Plan.

### Medical benefits

A medical benefits scheme has operated since July 1953, being authorised firstly by the National Health (Medical Benefits) Regulations and then by the *National Health Act* 1953-1972. The basic principle of the scheme is Commonwealth support of voluntary insurance towards meeting the costs of medical attention. The benefits under the scheme relate primarily to medical attention on a fee-for-service basis, although provision is made for a Commonwealth subsidy to organisations arranging for medical service on a contract basis.

In order to qualify for a Commonwealth fee-for-service benefit a person is required to be insured with a registered medical benefits organisation. The organisation pays the Commonwealth benefit to the contributor, usually at the time it pays its own benefit. Reimbursement of the Commonwealth benefit is subsequently made to the organisation by the Commonwealth.

On 1 July 1970 the scale of benefits paid was considerably revised. Details of benefits are set out in the schedules to the *National Health Act* 1953-1972. There is one scale of benefits for each State. Standard weekly contributions to medical benefits organisations range from 25 cents to 42 cents for a single person and from 50 cents to 84 cents for a married contributor. The level of benefits has been set so that a contributor is required to pay 80 cents of the 'most common fee' charged for a general practitioner consultation, and up to \$5 for the more costly operations where the 'most common fee' is charged. In fixing the scale of 'most common fees', differential rates have been determined for certain medical services which are customarily performed by either a general practitioner or a specialist. To qualify for the higher (specialist) rate of benefit the patient must be formally referred to the specialist by another medical practitioner by means of a Notice of Referral. Higher benefits are also payable where the patient is referred to a specialist by a dentist for a service arising from a dental service, or by an optometrist or optician to an ophthalmologist.

In addition to the professional services normally rendered by a qualified medical practitioner, the schedules now cover certain prescribed medical services rendered in the operating theatre of an approved hospital by a legally qualified dentist or dental practitioner approved for this purpose by the Director-General of Social Security.

Contributors who would otherwise be excluded from fund benefits because of organisations' rules covering pre-existing or long-term ailments receive full fund benefits, with the Commonwealth re-imbursing the organisations for any deficits incurred in providing benefits in such cases.

Australian residents temporarily absent from Australia who receive medical attention by registered medical practitioners in the country they are visiting are entitled, if insured, to the Commonwealth benefit and the medical fund benefit to which they would be entitled if the service were rendered in Australia.

*Expenditure on medical benefits.* The following table shows the number of registered medical benefits organisations, their membership, the number of medical services rendered to members and their dependants, and payments of Commonwealth benefits and medical fund benefits to members of registered organisations. As many persons contribute on behalf of both themselves and their dependants, the total number of persons covered by medical insurance is considerably higher than the number of contributors. At 30 June 1972 the estimated number of persons covered by contributory medical insurance was 10,134,000.

MEDICAL BENEFITS: SUMMARY, STATES, 1971-72

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(a)
Registered organisations(b)(c)	No.	29	19	8	7	8	10	81
Members(c)	'000	1,562	1,155	402	420	358	131	4,028
Medical services	'000	16,736	11,475	4,781	5,262	3,814	1,202	43,271
Commonwealth benefit(d)	'000	50,952	33,146	12,753	15,074	11,652	3,484	127,061
Fund benefit(e)	'000	46,334	28,980	9,761	9,686	7,130	2,206	104,097

(a) Members who live in the Northern Territory or the Australian Capital Territory, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organisation registered in one of the States, and details for these members are included in the respective States. (b) Excludes interstate branches. (c) At 30 June 1972. (d) Excludes payments of \$3,787,000 towards special accounts deficits and \$228,000 towards management expenses of the Subsidised Health Benefits Plan. (e) Includes \$2,806,000 ancillary fund benefits and also includes \$1,498,000 fund benefits reimbursed to the organisations under the Subsidised Health Benefits Plan.

### Subsidised Health Benefits Plan

As from 1 January 1970 certain low income families, persons in receipt of unemployment, sickness or special benefits under Social Services legislation, and migrants during the first two months after their arrival in Australia, have been eligible for free medical benefits and hospital benefits up to the public standard ward charge. On 1 July 1970, the Plan was extended to provide certain families whose incomes were slightly in excess of the eligible limit for free insurance, with health insurance at reduced contribution rates. The income eligibility level for free insurance in these cases, effective from 5 June 1972, was \$51.50 per week, while families with incomes exceeding \$51.51 but not exceeding \$57.50 a week pay reduced contributions. From 1 November 1971 the Plan, formerly known as the Subsidised Medical Services Scheme, was renamed the Subsidised Health Benefits Plan and a pharmaceutical concession was introduced whereby all beneficiaries were entitled to purchase drugs and medicines dispensed under the Pharmaceutical Benefits Scheme for 50 cents per prescription instead of the usual \$1.00.

### Pensioner Medical Service

The Pensioner Medical Service, which commenced in 1951, was introduced under the authority of the National Health (Medical Services to Pensioners) Regulations made under the provisions of the *National Health Services Act* 1948-1949. The service has been continued under the provisions of the *National Health Act* 1953-1972.

Persons eligible to receive the benefits of the Pensioner Medical Service are those who receive an age, invalid or widow's pension, or a sheltered employment allowance, under the *Social Services Act* 1947-1972, or a service pension under the *Repatriation Act* 1920-1972, and who are able to satisfy the means test in force immediately prior to 1 October 1969; and their dependants. Also eligible are persons in receipt of an allowance under the *Tuberculosis Act* 1948, and their dependants.

The benefits provided to eligible persons consist of free medical service of a general practitioner nature such as that ordinarily rendered in the surgery or at the patient's home, including treatment at home following an operation. Patients may be charged a small fee by doctors for travelling and for attendance outside normal surgery or visiting hours. General practitioners enrolled in the scheme are paid on a fee-for-service basis by the Commonwealth Government.

Qualified persons are entitled to a wide range of medicines without charge at any pharmacy, on presentation of a doctor's prescription. Free hospital treatment is also provided for public, standard or general ward patients in public hospitals.



At 30 June 1972 the total number of pensioners and dependants enrolled in the Pensioner Medical Service was 1,254,554, while the number of doctors participating in the scheme at that date was 6,817. During 1971-72 doctors in the scheme provided 10,272,084 services (visits and surgery consultations) for persons enrolled in the scheme. For these services they were paid \$27,803,574. The average number of services rendered by doctors to each enrolled person was 8.32.

#### Free milk for school children scheme

The *States Grants (Milk for School Children) Act* 1950 was passed with the object of improving the diet of school children by the addition of a small quantity of milk each day. All children under the age of thirteen years attending government or non-government primary schools, including nursery schools, kindergartens, creches and missions for Aborigines, are eligible to receive free milk. The cost of the milk and half the capital or incidental costs, including administrative expenses of the scheme, are reimbursed by the Commonwealth to the States. All States participate in the scheme. At the end of 1971 approximately 1,922,000 children were entitled to receive free milk under this scheme. Expenditure by the Commonwealth Government during the years 1967-68 to 1971-72 was as follows.

COMMONWEALTH EXPENDITURE ON MILK FOR SCHOOL CHILDREN SCHEME  
STATES AND TERRITORIES, 1967-68 TO 1971-72  
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	3,357	2,628	1,376	955	853	511	75	106	9,861
1968-69	3,380	2,641	1,549	1,065	800	431	110	109	10,085
1969-70	3,458	2,650	1,570	910	800	476	95	124	10,083
1970-71	3,497	2,350	1,697	895	838	682	115	126	10,199
1971-72	3,662	3,501	1,869	1,065	1,001	516	127	153	11,894

The figures in the foregoing table represent amounts reimbursed to the States in each financial year for cash benefits to persons and other related expenditure and are not the actual State expenditures in that year.

#### Pharmaceutical benefits

All persons receiving treatment from a medical practitioner registered in Australia are eligible for benefits on a comprehensive range of drugs and medicines when supplied by an approved pharmacist upon presentation of a prescription, or by an approved hospital to patients receiving treatment at the hospital. Special arrangements exist to cover prescriptions dispensed at locations outside the normal conditions of supply e.g. in remote areas.

Until November 1971, patients other than eligible pensioners and their dependants paid 50 cents of the cost of each benefit prescription supplied. In November 1971 the patient contribution was increased from 50 cents to \$1.00 for each benefit prescription provided to patients other than eligible pensioners and their dependants and those covered by provisions relating to the Subsidised Health Benefits Plan. Patients qualifying under the Subsidised Health Benefits Plan continue to contribute at the rate of 50 cents for each benefit prescription supplied.

Total Commonwealth expenditure on pharmaceutical benefits in the year 1971-72 was \$173,268,448.

The following table sets out the number of prescriptions and expenditure on the more frequently prescribed therapeutic preparations under the Pharmaceutical Benefits Scheme for 1970-71 and 1971-72. The expenditure for both years includes patient contributions, which totalled \$35,466,642 in 1971-72. Prescriptions issued free to pensioners are included, and these amounted to \$52,005,350 in 1971-72. Benefits dispensed by hospitals and those covered by special arrangements are not included, these amounted to \$31,201,229 in 1971-72.

**PRESCRIPTIONS DISPENSED UNDER THE PHARMACEUTICAL BENEFITS SCHEME<sup>(a)</sup>  
1971 AND 1972**

Therapeutic category	Year ended 30 June			
	1971		1972	
	Prescriptions	Expenditure	Prescriptions	Expenditure
	000's	\$'000	000's	\$'000
Analgesics . . . . .	6,017	12,849	6,646	14,934
Antacids . . . . .	2,457	3,694	2,550	3,948
Anti-cholinergics . . . . .	1,098	3,592	1,213	4,147
Anti-convulsants . . . . .	625	2,073	1,248	2,871
Anti-depressants . . . . .	1,750	5,460	2,315	7,228
Anti-diabetics . . . . .	712	2,947	740	3,408
Anti-histamines . . . . .	4,554	8,357	4,517	8,580
Blood vessels—Drugs acting on . . . . .	3,627	13,583	3,754	14,814
Broad spectrum antibiotics . . . . .	6,678	18,954	6,803	20,721
Bronchial spasm—preparations . . . . .	2,012	5,313	2,414	8,053
Diuretics . . . . .	3,302	11,273	3,737	13,138
Expectorants and cough suppressants . . . . .	2,081	1,761	1,294	1,119
Eye drops . . . . .	1,358	2,245	1,418	2,424
Gastro-intestinal sedatives . . . . .	737	1,357	789	1,484
Genito-urinary infections—Drugs acting on . . . . .	1,287	4,856	1,330	4,676
Heart—Drugs acting on . . . . .	1,386	2,693	1,481	3,533
Iron preparations . . . . .	1,478	1,720	1,418	1,676
Penicillins . . . . .	5,724	15,045	5,210	14,534
Sedatives and hypnotics . . . . .	5,563	5,979	4,311	4,872
Sulphonamides . . . . .	813	1,102	927	1,852
Tranquillisers . . . . .	1,480	4,726	2,023	7,028
Other therapeutic substances . . . . .	16,748	28,162	16,304	32,494
<b>Total . . . . .</b>	<b>71,487</b>	<b>157,741</b>	<b>72,442</b>	<b>177,534</b>

(a) Excludes benefits dispensed by hospitals and those covered by special arrangements.

### Anti-tuberculosis campaign

Under an arrangement with the Commonwealth Government, each State conducts a campaign against tuberculosis. The Commonwealth Government reimburses the State for all approved capital expenditure in relation to tuberculosis, and for net maintenance expenditure to the extent that it exceeds maintenance expenditure for the year 1947-48. Thus the States carry out the physical or field work of the national campaign and the Commonwealth acts in an advisory, co-ordinating, and financial capacity. An advisory council, known as the National Tuberculosis Advisory Council, has been set up to advise the Minister with respect to the running of the campaign. There are twelve members, the chairman being the Commonwealth Director-General of Health.

To reduce the spread of infection the Commonwealth Government pays allowances to persons suffering from infectious tuberculosis, so that they may give up work and undergo treatment. These allowances have been in operation since 13 July 1950 and the current rates payable with effect from 14 December 1972 are shown in the following table. Persons eligible for the 'married persons' rate comprise only those with a dependent spouse; 'single persons' include widowers, divorcees and married persons without a dependant spouse.

### RATES OF TUBERCULOSIS ALLOWANCE: AUSTRALIA, 1972 (\$)

Classification	Weekly allowance
Married person rate . . . . .	43.75
Single person rate—	
Where there are dependent children . . . . .	29.50
Where there are no dependent children . . . . .	(a) 24.75

(a) Reduced to \$21.50 where treatment is received free of charge in an institution.

In addition to the above rates there may be payable a mother's or guardian's allowance of \$2.00 a week or supplementary assistance of up to \$2.00 a week. An allowance of \$4.50 a week is payable in respect of each dependent child of a sufferer.

There is a means test on income but not on property. The allowance is reduced by the amount by which a person's income from sources other than his allowance exceeds, in the case of a person receiving the married person rate, \$34.50 a week; a person who is without a spouse or dependent female and is entitled to a 'single person' rate, \$20.00 a week; and a person with a spouse but who is not entitled to a 'married person' rate, \$17.25 a week.

*Commonwealth expenditure.* Expenditure by the Commonwealth Government on its anti-tuberculosis campaign is set out in the following tables.

**COMMONWEALTH EXPENDITURE ON ANTI-TUBERCULOSIS CAMPAIGN  
STATES AND TERRITORIES, 1971-72**  
(\$'000)

State or Territory	Cash benefits to persons—		Grants to States— Capital	Total(c)
	Welfare(a)	Health(b)		
New South Wales . . . . .	217	2,971	70	3,258
Victoria . . . . .	157	3,170	119	3,446
Queensland . . . . .	143	1,528	6	1,677
South Australia . . . . .	48	715	155	918
Western Australia . . . . .	32	875	88	995
Tasmania . . . . .	33	337	..	370
Northern Territory . . . . .	..	..	..	..
Australian Capital Territory . . . . .	..	1	..	1
<b>Australia . . . . .</b>	<b>630</b>	<b>9,596</b>	<b>438</b>	<b>10,664</b>

(a) Allowances to sufferers.

(b) Tuberculosis campaign.

(c) Includes administrative costs.

**COMMONWEALTH EXPENDITURE ON ANTI-TUBERCULOSIS  
CAMPAIGN: AUSTRALIA, 1967-68 TO 1971-72**  
(\$'000)

Year	Cash benefits to persons—		Grants to States— Capital	Total(c)
	Welfare(a)	Health(b)		
1967-68 . . . . .	1,091	11,266	780	13,382
1968-69 . . . . .	921	11,460	847	13,511
1969-70 . . . . .	771	10,554	593	12,246
1970-71 . . . . .	659	10,597	469	12,067
1971-72 . . . . .	630	9,596	438	10,664

(a) Allowances to sufferers.

(b) Tuberculosis campaign.

(c) Includes administrative costs.

### Mass immunisation campaigns

*Poliomyelitis.* An anti-poliomyelitis campaign, using Salk vaccine, was commenced in 1956. This campaign continued until 1967 when, following a recommendation by the National Health and Medical Research Council, a campaign using Sabin vaccine was commenced in all States, the Northern Territory and the Australian Capital Territory. The Sabin vaccine is taken orally and a course of treatment consists of three doses. These are given at intervals of eight weeks. In the five years prior to 1972 seven new cases of poliomyelitis were notified, one of them being in 1971. During 1972 seven new cases were notified, three from Victoria and four from Western Australia.

*Measles.* As a result of a recommendation by the National Health and Medical Research Council in May 1969, campaigns against measles commenced in early 1970 and during 1972 were in operation in all States, the Australian Capital Territory and the Northern Territory. The vaccine being used is derived from the Schwarz virus strain which is a live attenuated virus. It is administered by intramuscular injection to children in their second year of life. A course of treatment consists of one dose. A total of 190,090 doses was distributed through the Commonwealth Serum Laboratories during 1972.



*Rubella.* In 1969, the National Health and Medical Research Council recommended that the Cendehill rubella vaccine be used in anti-rubella (German measles) campaigns in Australia. Consequently, the Commonwealth agreed to make this vaccine available to the States on the same basis as poliomyelitis and measles vaccines. By December 1970 all States had indicated that they would accept this offer. Immunisation campaigns have been conducted in all States, the Northern Territory and the Australian Capital Territory since 1971 amongst girls in the twelve to fourteen years age group. The vaccine is available from health departments and, through them, from private practitioners to other women at risk. A course of treatment with rubella vaccine, given intramuscularly, is one dose.

### Commonwealth health services organisations

*The Commonwealth Health Laboratory Service* was established under provisions of the *National Health Act* 1953-1972. The laboratories provide diagnostic and investigational facilities at sixteen locations, principally in country areas, throughout Australia. Health laboratories are situated in Albury, Alice Springs, Bendigo, Cairns, Canberra, Darwin, Gove, Hobart, Kalgoorlie, Launceston, Lismore, Port Pirie, Rockhampton, Tamworth, Toowoomba and Townsville. Their primary role is to assist medical practitioners in the diagnosis of illness and disease and to provide facilities for investigations into public health and aspects of preventive medicine. During 1971-72, the laboratories carried out approximately 3.1 million pathology tests and investigations in respect of 994,303 patient requests. The work of the laboratory at Gove is not included in these figures as it had not commenced operations during 1971-72, specimens being referred to Darwin for investigation.

The *Commonwealth Serum Laboratories (CSL)* are controlled by the Commonwealth Serum Laboratories Commission, a corporate body established under the *Commonwealth Serum Laboratories Act* 1961-70. CSL is Australia's leading centre for the production and supply of biological products for human and veterinary use and one of Australia's foremost scientific institutes.

Its main functions are to produce and sell prescribed biological products used for therapeutic purposes and to ensure the supply of prescribed essential biological products in accordance with national health needs. The functions include research and development relating to the range of products in its charter and allied fields and the maintenance of potential production capacity for use in emergencies. Located at Parkville, Melbourne, CSL's research laboratories and manufacturing and storage buildings now cover most of the 27-acre site of Crown Land granted in 1918.

For several decades, CSL has been Australia's chief supplier of biological medicines, insulins, vaccines, penicillins, human blood fractions, BCG and an ever-increasing range of veterinary biological products needed by Australia's sheep, cattle, pig and poultry industries.

In addition, biological research into many kinds of human and veterinary disease is carried out, covering the fields of bacteriology, biochemistry, immunology and virology.

The Laboratories employ more than 1,000 people, including medical officers, veterinarians, bacteriologists, biochemists, physicists, engineers, accountants, laboratory assistants and skilled tradesmen.

*The Commonwealth Radiation Laboratory* was originally established in 1929 as the Commonwealth Radium Laboratory, and has served from that time as the Commonwealth centre for radiological physics and as custodian of all Commonwealth-owned radium used for medical purposes. The laboratory's functions have expanded over the years to include the physical aspects of X-rays; the distribution of all radio-isotopes used in Australia for medical purposes; the maintenance of facilities for radio-chemical investigation; the assay of radioactive substances in the Australian environment; and the maintenance of a whole-body monitor. National standards for the measurement of X-rays and of radio-isotopes are also maintained. The laboratory provides assistance in matters relating to protection against ionising radiations and operates a film-badge service to monitor the radiation exposure of those who work with such radiation. The advisory service on protection has recently been extended to include the hazards associated with the use of microwave and laser radiations. In 1971-72 there were 12,341 deliveries of radio-isotopes, comprising 41 different isotopes, procured for use in medicine and medical research. Of these 10,922 deliveries were obtained from the Australian Atomic Energy Commission. Free issues for medical diagnosis and therapy supplied for patients throughout Australia were 246,467, the cost of \$925,097 being met from the National Welfare Fund. Film badges, numbering 74,345 were processed, assessed, and reported on. The Laboratory also supplies radon to approved hospitals and private practitioners in Australia and New Zealand. In 1971-72, 24,078 millicuries of radon were issued. Administrative costs for 1971-72 were \$401,778 and \$28,901 was expended on plant and equipment.

The *Commonwealth Acoustic Laboratories* were established under the *Acoustic Laboratories Act* 1948 to undertake scientific investigations into hearing and problems associated with noise as it affects individuals. The Laboratories' functions also include research into medical applications of ultrasound and advice to the Armed Forces and Commonwealth Departments and instrumentalities on hearing conservation and the reduction of noise. Audiological services are provided in major centres throughout Australia to assist children, ex-servicemen and pensioners with hearing problems. Hearing aids are supplied and serviced free of charge to persons under 21 years, and to pensioners and their dependants for a hiring fee of \$10. Hearing aids are also provided and maintained on behalf of the Repatriation and other Commonwealth Departments. During 1971-72 the number of new cases examined at the laboratories was 29,284 including 11,322 children, 5,586 repatriation cases, 877 members of the defence forces, 8,765 pensioners and 806 civil aviation referrals; 15,245 calaid hearing aids were fitted and 72,489 were on loan at the end of the year. The cost of supply and maintenance of hearing aids to persons under twenty-one years of age and pensioners was \$643,959. Administrative costs of the laboratories were \$1,311,024 and expenditure on plant and equipment \$83,262.

The *Home Nursing Subsidy Scheme*, under the *Home Nursing Act* 1956, provides for a Commonwealth subsidy to assist in the expansion of home nursing activities. Organisations eligible for the subsidy are those which are non-profit making, employ registered nurses, and receive assistance from a State Government, local government body or other authority established by or under State legislation. During 1971-72 subsidies totalling \$1,835,215 were paid to 115 organisations providing home nursing services in the States. Home nursing services in the Northern Territory and the Australian Capital Territory are provided by the Commonwealth Department of Health.

### Other Commonwealth health organisations

The *National Health and Medical Research Council* was established in 1936 to replace the National Health Council. Its main functions are to advise Commonwealth and State Governments on all matters of public health legislation and administration, on matters concerning the health of the public, and on medical research. It also advises the Commonwealth and State Governments on the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition. The Council advises the Commonwealth Minister for Health on the application of expenditure from the Medical Research Endowment Fund which was established under the *Medical Research Endowment Act* 1937 to provide assistance to departments of the Commonwealth or of a State engaged in medical research; to universities for the purpose of medical research; to institutions and persons engaged in medical research and in the training of persons in medical research. The Commonwealth makes a triennial appropriation for the Fund, that for 1973 to 1975 being \$13,500,000.

The *School of Public Health and Tropical Medicine* was established in 1930 by the Commonwealth Government at the University of Sydney under an agreement with that University. It provides, for medical graduates and certain undergraduates, training in public health and tropical medicine in addition to carrying out research and consultative activities in these and allied fields. During 1972, thirteen diplomas were awarded in Public Health and seven in Tropical Medicine and Hygiene. Costs met by the Commonwealth during 1971-72 were \$764,556 for administration and \$16,060 for plant and equipment.

The *Institute of Child Health* is associated with the School of Public Health at the University of Sydney and with the Royal Alexandra Hospital for Children at Camperdown. Its activities include research into medical and social problems of childhood, undergraduate and postgraduate teaching at the University of Sydney, collaboration with other national and international organisations concerned with child health and disease, and the training of United Nations and Colombo Plan Fellows. Costs of the Institute paid by the Commonwealth during 1971-72 were \$185,399 for administration and \$34,464 for plant and equipment.

The *Commonwealth Bureau of Dental Standards* operates under Section 9 of the *National Health Act* 1953-1972. It is part of the Commonwealth Department of Health and is concerned with research and testing related to dental and allied materials, instruments and processes. It assists in the preparation of recognised standards for materials and instruments through the Standards Association of Australia and co-operates with the Australian Dental Association in its programme of accreditation of products. Its functions include the provision of a consultative service and testing facilities for public instrumentalities, the dental profession, and manufacturers and distributors of dental products. The number of these products tested during 1971-72 was 404. Regular surveys are made of dental products on the market and the results are made available to the profession. Expenditure on plant and equipment for 1971-72 was \$5,070 and administrative expenses including salaries were \$71,850.



*The Australian Institute of Anatomy* is administered by the Australian Capital Territory Health Services Branch of the Commonwealth Department of Health. Its prime function is the maintenance of two museums which are open to the general public and contain exhibits of an educational nature. One museum contains anatomical and biological displays while the other is devoted to the display of items from the National Ethnographic Collections which are held in trust by the Institute until a museum is erected to house them. In this section particular emphasis has been placed on the life and culture of the Australian Aborigines.

*The National Biological Standards Laboratory* was set up under the *Therapeutic Substances Act* 1953-1959 which empowers the Commonwealth to ensure that therapeutic substances used for the prevention, diagnosis, and treatment of disease in man and animal are safe, pure, and potent. The *Therapeutic Goods Act* 1966, was proclaimed on 12 November 1970. This Act repealed the *Therapeutic Substances Act* 1953-1959 and extended the Commonwealth's power to cover therapeutic goods such as surgical dressings and containers of substances for therapeutic use. The Commonwealth Director-General of Health is authorised under the Act to set up laboratories to test such substances. Of the 2,041 samples examined by the Laboratory during 1971-72, 227 failed to meet the required standards. In addition, 1,965 safety tests were performed, 13 were failed, and 47 were indeterminable. Administrative costs for 1971-72 were \$896,640 and \$108,164 was expended on plant and equipment.

*The Drug Evaluation Committee* was formally set up in June 1963 to advise on the importation of new and existing drugs and toxicity of drugs already available on the Australian market. It has power to co-opt and seek advice from specialist medical colleges and associations, and from the medical and allied professions, the drug manufacturers and other sources. The Committee's reports and resolutions have resulted in the establishment of a Register of Adverse Drug Reactions and amendments to the Customs (Prohibited Imports) Regulations implemented on 1 August 1970 to provide control on importation of new drugs. During 1971-72, 138 applications for general marketing were received, an increase of 5 over the previous year. In addition, 74 applications for clinical trials were submitted.

*The Hospital and Allied Services Advisory Council* was created by agreement at the 1970 Australian Health Ministers Conference to provide the Ministers with advice on the co-ordination of the various matters connected with hospital and allied services through the operation of five sub-committees. The five Committees of Council are the Uniform Costing Committee, the Research Committee, the Computer Committee, the Hospital and Allied Services Construction Planning Committee and the Post-graduate Accreditation Committee.

## Commonwealth grants to States

### Grants for mental health institutions

Following a survey of the mental health facilities and needs in Australia made in 1955, the Commonwealth made an offer of \$20 million to the States as part of a capital expenditure programme of \$60 million on increasing and improving patient accommodation. All States accepted the Commonwealth offer. By 1963 more than three-quarters of the total grant under the *States Grants (Mental Institutions) Act* 1955 had been distributed and the Commonwealth Government announced in November 1963 its intention of continuing assistance to the States towards capital costs on a similar basis, but without overall limit, for a period of three years. In May 1964 the *States Grants (Mental Health Institutions) Act* 1964 was passed to implement that policy. This Act provided for the continuation of Commonwealth aid of \$1 for every \$2 of capital expenditure by the States in connection with the buildings or equipment of mental health institutions for the three-year period ending 30 June 1967. With the passing of amending Acts in 1967 and 1970 this period has been extended firstly to 30 June 1970 and then to 30 June 1973. The following table sets out the amounts which have been paid to the State Governments by the Commonwealth Government from 1967-68 to 1971-72.

EXPENDITURE ON MENTAL HEALTH INSTITUTIONS BY THE COMMONWEALTH GOVERNMENT: STATES, 1967-68 TO 1971-72  
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1967-68.	2,095	1,381	196	63	148	358	4,243
1968-69.	1,925	1,200	323	433	375	399	4,655
1969-70.	2,305	947	602	1,299	241	108	5,501
1970-71.	1,414	798	464	909	395	219	4,199
1971-72.	1,325	828	1,169	246	454	185	4,207



### Paramedical services

The *States Grants (Paramedical Services) Act* 1969 provides for the Commonwealth to share on a \$1 for \$1 basis with participating States the cost of approved paramedical services, such as chiropody, occupational therapy, physiotherapy and speech therapy, provided wholly or mainly for aged persons in their homes. Matching grant payments during 1971-72 amounted to \$6,925.

### Commonwealth grants to organisations associated with public health

In addition to providing the services mentioned on pages 425-39, the Commonwealth Government gives financial assistance to certain organisations concerned with public health. Examples of organisations included in this category are given in the following text. More detailed information on their operations and functions is given in Year Book No. 53, pages 570-3.

*The Commonwealth Council for National Fitness* operates under the *National Fitness Act* 1941. Its main function is to advise the Minister for Health concerning the promotion of national fitness. The Act also provides for the establishment of a trust account, known as the National Fitness Fund, to assist in financing the movement. During 1971-72 the Commonwealth's contribution to the Fund was \$418,000, of which \$68,000 was for assistance towards capital expenditure. Expenditure from the Fund during 1971-72 was \$437,391, distributed as follows: State National Fitness Councils, \$270,308; State Education Departments, \$34,000; State Universities, \$24,800; Australian Recreation Leadership Course, \$6,600; capital expenditure on national fitness projects, \$87,391; grants to Australian Capital Territory organisation, \$7,500; and administration, \$6,792. With the transfer of responsibility for the *National Fitness Act* 1941 from the Department of Health to the Department of Tourism and Recreation, the National Fitness section of the Department of Health ceased to function in December 1972.

*The Royal Flying Doctor Service* is a non-profit organisation providing medical services in remote areas of Australia. It is distinct from, but co-ordinates with, the Aerial Medical Services operated by the Commonwealth Department of Health from Darwin and Alice Springs in the Northern Territory. The Royal Flying Doctor Service is financed mostly from donations and government contributions. During the triennium ended 30 June 1974 the Commonwealth Government is contributing at the rate of \$485,000 per annum—\$170,000 capital assistance and \$315,000 towards operational costs. In addition, payments of \$131,596 have been made up to 30 June 1972 towards the cost of the changeover of twelve radio base stations to single side band operation. The Service made 3,543 flights during 1971-72, travelling 1,648,333 miles and transporting 4,219 patients. In the same period medical staff conducted a total of 84,664 consultations and dental treatment was given to 1,625 patients. The radio network of the Service handled 277,469 telegrams.

*The Red Cross Blood Transfusion Service* is conducted by the Australian Red Cross Society throughout Australia. The operating costs of the service in the States are met by the State Governments paying 60 per cent; the Commonwealth, 30 per cent; and the Society, 10 per cent. In the Northern Territory and Australian Capital Territory the Commonwealth pays 90 per cent and the Society 10 per cent. Commonwealth expenditure for each State and Territory during 1971-72 was as follows: New South Wales, \$254,500; Victoria, \$268,545; Queensland, \$191,550; South Australia, \$139,488; Western Australia, \$106,057; Tasmania, \$29,805; Northern Territory, \$36,200; and the Australian Capital Territory, \$23,000, making a total of \$1,049,145.

*The National Heart Foundation of Australia* is a private national organisation established to promote research in cardiovascular disease, to rehabilitate heart sufferers and to foster the dissemination of information about heart diseases. The foundation was formed in 1960 as a result of a public appeal yielding \$5 million to which the Commonwealth Government contributed \$20,000. A further appeal in 1969 raised \$1.6 million and the Foundation now has an annual income from public donations of over \$600,000. In 1972 the Commonwealth Government made a grant to the Foundation of \$250,000. Expenditure in 1972 came to almost \$1 million of which about half was devoted to supporting research into cardiovascular disease. This is the single most important function of the Foundation and from its inception to the end of 1972 it has allocated well over \$5 million for grants-in-aid towards research in university departments, hospitals and research institutes; research fellowships tenable in Australia and overseas; and overseas travel grants for study purposes.

*The World Health Organisation (WHO)*, founded during 1948, is a specialised agency of the United Nations having as its objective the attainment by all peoples of the highest level of health. It functions as the directing and co-ordinating authority in international health work; provides consultative and technical assistance to governments and special groups; examines all aspects of health including preventive and curative medicine and research; sets international standards with respect to food, biological, pharmaceutical and similar products; and determines regulations for

the control of quarantinable diseases. The organs of WHO are the World Health Assembly and the six Regional Committees which meet annually and the Executive Board which meets twice a year. Australia is assigned to the Western Pacific Region the headquarters of which is at Manila, and was represented at both the 25th World Health Assembly in Geneva in May and the Regional Committee Meeting in Guam in September 1972. Australia's contribution to WHO for 1971-72 was \$A933,665.

The *International Agency for Research on Cancer* was established by the 18th World Health Assembly in 1965 within the framework of the World Health Organisation. The headquarters of the Agency are located in Lyon, France. The objectives and functions of the Agency are the provision for planning, promoting and developing research in all phases of the causation, treatment and prevention of cancer; collection and dissemination of information on epidemiology and cancer research throughout the world; education and training of personnel for cancer research; and the encouragement of, and assistance at national level if necessary by the direct establishment of, research organisations. Participation in the Agency is subject to membership of the World Health Organisation and, at the determination of the Governing Council, the ability of the State to contribute effectively to the scientific and technical work of the Agency. Australia became a Participating State within a few months after the establishment of the Agency. At present there are 10 Participating States namely: Australia, Belgium, France, the Federal Republic of Germany, Italy, Japan, The Netherlands, The Union of Soviet Socialist Republics, the United Kingdom and the United States of America. Australia's contribution to the I.A.R.C. for 1971-72 was \$A148,211.

## Commonwealth Parliamentary Committees concerning Public Health

### Senate Select Committee on Drug Trafficking and Drug Abuse

On 25 November 1969, the Senate resolved that a Select Committee of the Senate be appointed to inquire into and report upon drug trafficking and drug abuse in Australia and, in particular, (a) the incidence, distribution and causes of drug abuse; the extent, organisation and methods of drug trafficking, including the sources of supply; the adequacy of existing Commonwealth and State legislation and administration; the adequacy of present educational programmes against drug abuse; the adequacy of existing international agreements affecting Australia; the effectiveness of existing international law enforcement agencies and methods in regard to Australia, and (b) to make such recommendations as it may think fit, on legislative and administrative measures by the Commonwealth to prevent and deal with drug trafficking and drug abuse; the desirability of further international agreements or improvements in existing international law enforcement agencies and methods so far as they affect Australia; and the treatment and rehabilitation of persons dependent on drugs. The report of this Committee was tabled on 6 May 1971. For information on drug detection and offences see Chapter 15, Law, Order and Public Safety.

### House of Representatives Select Committee on Pharmaceutical Benefits

On 16 September 1970, the House of Representatives resolved that a Select Committee be appointed to inquire into and make recommendations on all aspects of the provision of, and arrangements for the supply of, pharmaceutical benefits under the *National Health Act* 1953-1970, with particular reference to the scope of the scheme; all factors contributing to the cost of the scheme; and the effects of the scheme on the health and welfare of the community. The report was tabled on 25 May 1972.

### Senate Standing Committee on Health and Welfare

On 11 June 1970, the Senate created the Standing Committee on Health and Welfare. On 2 September 1970, the Senate resolved to refer to this Committee the problems of, and the provisions for assistance to, mentally and physically handicapped persons in Australia. The report of this Senate Standing Committee was tabled on 5 May 1971.



## STATE GOVERNMENT ACTIVITIES

(Includes activities of the Commonwealth Government in the Northern Territory and the Australian Capital Territory)

### Public health legislation and administration

For a comprehensive account of the administration of health services prevailing in 1966 in each State, the Northern Territory and the Australian Capital Territory, *see* pages 543–50 of Year Book No. 53. For details of legislation and administrative changes in subsequent years *see* Year Book Nos. 54 to 58. The following paragraphs refer briefly to recent developments.

In *New South Wales*, as part of the planning for complete regionalisation of hospital services, all public hospitals have been tentatively allocated to seven country and three metropolitan regions. Regional offices of the Hospitals Commission have been established and are fully operational for all regions.

The Health Commission Act, 1972, was assented to on 23 November 1972 to constitute the Health Commission of New South Wales and to define its powers, authorities, duties and functions; to dissolve the Hospitals Commission of New South Wales and the Board of Health and to abolish the Department of Health; to amend the Public Health Act, 1902, the Public Hospitals Act, 1929, and certain other Acts. A date has not yet been proclaimed for the Act to commence.

The Clean Air (Amendment) Act, 1972, was introduced and empowers the Minister to prohibit, by order, burning in open fires of any matter except for certain purposes such as recreational, domestic and agricultural purposes. Also, the Clean Air (Further Amendment) Act, 1972, was introduced and prohibits the sale or use of motor vehicles that emit excessive air impurities, to enable regulations to be made requiring that motor vehicles be fitted with prescribed antipollution devices. Both these Acts amend the Clean Air Act of 1961.

The Clean Waters Act, 1970, and Regulations became effective from 3 November 1972, giving the State control over the pollution of waterways.

The Cigarettes (Labelling) Act, 1972 was introduced to prohibit the sale or use of cigarettes in New South Wales except in packages marked with the prescribed health warning.

The Medical Practitioners (Amendment) Act 1972 was introduced, to vary the constitution of the New South Wales Medical Board; to make further provisions with respect to the registration of medical practitioners and the powers, authorities, duties and functions of the Board, the investigating committee and the disciplinary tribunal; to establish a Register of Specialists for New South Wales and to provide for the registration of certain persons.

The Blacktown Health Centre situated in the grounds of Blacktown District Hospital was opened on 26 May 1972. This Centre represents the latest development in the changing attitude to community health services in its location and close association with a public hospital. The Centre provides child health, mental health and health education facilities.

The King George V and Queen Mary Maternal and Infant Welfare Research Laboratories located in the grounds of the Royal Prince Alfred Hospital were opened on 15 September 1972. The laboratories, constructed from the resources of the King George V and Queen Mary Maternal and Infant Welfare Foundation, the Royal Prince Alfred Hospital and the Government, will provide endocrine assays in respect of patients of all obstetric units in the metropolitan area.

In *Victoria* the establishment of the Alcoholics and Drug Dependent Persons Services Branch of the Health Department is nearing completion and the drug education facilities are continuing to expand under the Commonwealth-States arrangement.

A *Dental Technicians Act* 1972 has been introduced to control the training, registration and practice of dental technicians.

A general amendment of the Health Act was introduced to provide for better control of private hospitals but incorporating a number of necessary amendments relating to the control of dangerous substances, the supervision of tents and amusement structures used by the public; the supervision of food premises and the adoption from time to time of new issues of the British Pharmacopoeia.

An amendment of the *Medical Practitioners Act* 1970 provides for a compulsory twelve month period as an intern in a hospital for all persons registered by the Medical Board of Victoria after 1 October 1973.



Other amendments passed by the Parliament related to: the *Chiropodists Act* 1968—an extension of time from one to two years in which persons in practice at the commencement of the *Chiropodists Act* 1968 may seek registration; the *Medical Health Act* 1959—members of the police force were authorised to take patients to a psychiatric hospital on the request of a relative or friend seeking to arrange the patient's admission; and the *Nurses Act* 1958, and *Opticians Registration Act* 1958—increased fees for registration, etc.

A Joint Select Committee of the Parliament was established by special Act to inquire into and report upon the activities of Osteopaths, Chiropractors and Naturopaths and to make recommendations for future forms of control of these practices.

In *Queensland*, the *Medical Act Amendment Act* of 1971 was passed to enable medical practitioners who hold satisfactory qualifications gained in Canada to become eligible for registration in Queensland without further examination.

The *Health Act Amendment Act* of 1971 increased the area and power of authority to control illicit and illegal use of dangerous drugs, prohibited plants, and implements used in connection with the drugs of addiction, with the important provision of an offence for trafficking in dangerous drugs, as distinct from possession of these drugs. Emphasis was given to this trafficking offence with the declaration of harsher penalties including imprisonment.

In *Western Australia* the *Dentists Act Amendment Act*, 1972 was assented to on 6 December, 1972, making provision for the training and employment of Dental Therapists as well as establishing a committee to be known as the Dental Charges Committee with power to investigate fees or remuneration payable to a dentist for dental service.

The *Noise Abatement Act*, 1972 was also assented to on 6 December, 1972 which allows for the appointment of a Noise and Vibration Council which, with the assistance of an Advisory Committee, may make regulations or model by-laws to initiate the means of preventing, abating or mitigating the nuisance arising from noise and vibration.

### Supervision and care of infant life

Because the health of mothers and infants depends largely on pre-natal attention as well as after-care government, local government and private organisations provide instruction and treatment for mothers before and after confinement. The health and well-being of mother and child are looked after by infant welfare centres, baby clinics, creches, etc.

In all States, Acts have been passed with the object of supervising the conditions of infant life and reducing the rate of mortality. (Information about infant mortality will be found in Chapter 8, Vital Statistics.) Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons.

Under the provisions of the *Social Services Act* 1947–1972 maternity allowances provide financial assistance towards the expenses associated with the birth of children. Information about maternity allowances is given in Chapter 13, Welfare Services.

#### Nursing activities

Several State Governments maintain centres which provide advice and treatment for mothers and children and, in addition, subsidies are granted to various associations engaged in welfare work.

*Infant welfare centres.* The following table gives particulars of the activities of infant welfare centres for the year 1972. The figures relate to all centres, whether permanently staffed or on a temporary or part-time basis. Centres may be located at accommodation specially provided for this purpose, or at halls, schools, etc.

INFANT WELFARE CENTRES: STATES AND TERRITORIES, 1972

	N.S.W.	Vic.	Qld(a)	S.A.(a)	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
Number of centres(b)	439	738	288	297	86	111	20	51	2,030
Attendances at centres	1,215,612	1,587,636	560,952	319,734	273,226	164,762	34,881	84,146	4,240,949
Nurses' home-visits(c)	52,570	157,738	3,248	37,200	33,343	67,274	7,219	18,478	377,070
Nurses' hospital-visits(d)	63,783	24,983	32,076	n.a.	18,909	n.a.	1,994	104	n.a.

(a) Year ended 30 June 1972.

(b) At end of year.

(c) Pre- and post-natal.

(d) Post-natal.

Mobile units are used to service centres in some States. In 1972, the numbers of units and centres served, included in the above table, were as follows: Victoria, 4 and 14; Queensland, 3 and 34; South Australia, 2 and 28; Western Australia, 4 and 42. The number of centres for Tasmania includes 13 areas visited by sisters in cars. The number of centres for the Australian Capital Territory includes 5 areas covered by home visits.

Since 1930, the number of attendances at the infant welfare centres has increased more than four-fold. The numbers of attendances at ten year intervals since 1930 were as follows: 1930, 919,893; 1940, 2,035,299; 1950, 3,049,375; 1960, 3,482,383; and 1970, 4,010,906.

*Bush Nursing Associations.* Treatment for mothers and children is also provided by the Bush Nursing Associations. The numbers of centres maintained by the Associations in 1972 were: New South Wales, 11; Victoria, 58; Queensland, 5; South Australia, 39; and Western Australia, 11. In Tasmania, all of the district nursing centres have been taken over by the nearest public hospital and are no longer distinct entities.

### Medical and dental inspection of school children

For details of the administration of school health services in each State, the Northern Territory, and the Australian Capital Territory, see Year Book No. 55, pages 458-61. Further information about the operation of the school medical and dental services is given in State Year Books. The following paragraphs summarise features common to most States.

Medical and dental inspection of school children is carried out in all States under the control of State health departments, and in the Northern Territory and the Australian Capital Territory under the control of the Commonwealth Department of Health. The school health services are available to both government and non-government schools in metropolitan areas and larger country towns. In some States, special arrangements are made for children attending schools in more remote country areas.

The aim of the school medical services is to medically examine all children at least once during their school careers, usually on entry into primary school. Review examinations or, in some States, tests of vision and hearing by school nurses, are conducted in upper-primary and lower-secondary grades. Parents or guardians are notified of any departure from normal health and advised to seek further attention if necessary.

The aim of the school dental services is to examine and give regular dental treatment to children. Usually, acceptance for treatment is limited to children in primary schools. Some school children are treated at hospital dental clinics. Aboriginal missions and orphanages are also visited by school dentists. The consent of a parent or guardian is necessary before treatment can be given. In some States, priority is given to children who live in areas beyond the easy reach of other dental services. Treatment in remote areas is facilitated by the use of travelling dental clinics.

The following table summarises school health services in the States and Territories. Uniform concepts and definitions have not been developed, so Australian totals have not been shown.

SCHOOL HEALTH SERVICES: STATES AND TERRITORIES, 1972

	N.S.W.	Vic.	Qld(a)	S.A.	W.A.	Tas.	N.T.(a)	A.C.T.
School medical services—								
Staff (b)—								
Medical officers . . . . .	70	45	5	13	8	12	4	3
School nurses . . . . .	95	49	35	13	25	30	9	6
Medical examinations—								
Children examined . . . . .	312,036	204,248	130,901	(c)77,659	33,901	(c)28,945	(d)12,209	24,869
Found with defects . . . . .	25,922	17,762	(e)7,683	(c)13,046	8,481	5,606	896	2,407
School dental services—								
Number of dental clinics—								
Stationary . . . . .	10	3	..	23	19	28	n.a.	36
Mobile . . . . .	(f)19	15	(g)4	5	3	23	n.a.	1
Staff(b)—								
Dental officers . . . . .	35	29	20	24	21	21	n.a.	17
Dental assistants, therapists and nurses . . . . .	50	37	..	38	18	62	n.a.	45
Dental examinations—								
Children examined . . . . .	79,760	31,620	(h)29,489	23,921	63,985	48,575	25,645	21,690
Number treated . . . . .	20,949	27,886	(h)9,461	22,356	n.a.	n.a.	n.a.	20,904

(a) Year ended 30 June 1972. (b) Full-time and part-time. (c) Excludes some children tested for hearing and vision by school sisters. (d) Includes pre-school children. (e) Number of defects found. (f) There is also a dental team with the Royal Flying Doctor Service (based at Broken Hill). (g) In addition, portable dental equipment is possessed by 13 dental officers who function from departmental vehicles. (h) Only children who reside in more remote areas.

## HOSPITALS AND OTHER STATISTICS

This section provides statistical information on hospitals and nursing homes; notifiable diseases; a survey of chronic illnesses and impairments; and cremations. The institutions referred to under this heading are classified into the following groups: public hospitals and nursing homes; private hospitals and nursing homes; repatriation hospitals; Hansen's hospitals; and mental health institutions. Statistics of quarantine stations, and of hospitals maintained by the Armed Services, are not included.

## Public hospitals and nursing homes

The statistics shown for public hospitals and nursing homes refer to the following institutions: *New South Wales*—all in-patient institutions under the authority of the New South Wales Hospitals Commission, and which receive a government subsidy during the year, and the six State hospitals and nursing homes under the control of the Department of Public Health; *Victoria*—all subsidised institutions under the authority of the Victorian Hospitals and Charities Commission, one tuberculosis sanatorium, and the Peter MacCallum Clinic, but not the exotic diseases block at the Fairfield Hospital; *Queensland*—all hospitals and nursing homes open to all sectors of the public and administered by the State Government or by District Hospital Boards or those which are approved by the Commonwealth Health Department as public and have all of their beds approved as public; *South Australia*—all hospitals controlled and maintained by, or which receive a regular annual grant or subsidy for maintenance purposes from, the State, local government or semi-government authorities; *Western Australia*—all departmental and subsidised board hospitals, including Perth Dental Hospital; *Tasmania*—all public hospitals designated as such by the Director-General of Health Services, together with three homes for the aged, and one chest hospital; *Northern Territory*—departmental hospitals at Darwin, Alice Springs, Tennant Creek, and Katherine; *Australian Capital Territory*—the Canberra Hospital and the Queen Elizabeth II Coronation Home for post-natal care.

A number of institutions classified by the Commonwealth Department of Health as 'public' hospitals or nursing homes are not included in the statistics of public hospitals and nursing homes: there were 86 such institutions at June 1971, with an approved bed capacity of 4,154.

## Number, staff and accommodation

## PUBLIC HOSPITALS AND NURSING HOMES: NUMBER, STAFF AND ACCOMMODATION, STATES AND TERRITORIES, JUNE 1971

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Number of hospitals and nursing homes . . . . .	271	158	144	68	101	24	4	2	772
Medical staff—									
Salaried . . . . .	1,488	1,808	1,120	402	393	186	50	36	5,483
Other(a) . . . . .	5,717	2,490	172	623	401	179	23	231	9,836
Nursing staff(b) . . . . .	22,390	16,732	8,181	5,801	5,622	2,218	530	717	62,191
Accommodation—									
Number of beds and cots . . . . .	28,729	17,639	12,698	5,257	7,238	3,007	672	676	75,916

(a) Includes honorary and visiting medical officers who may hold appointments at more than one hospital. (b) Qualified and student nurses, assistant nurses, assistant nurse trainees, nursing aides, and nursing aide trainees.

## In-patients treated

The following table gives particulars of in-patients treated. The figures shown refer to cases, that is to say, a person who is admitted to hospital or nursing home twice during a year is counted twice. Newborn babies are excluded unless they remain in hospital or nursing home after their mothers' discharge.



**PUBLIC HOSPITALS AND NURSING HOMES: IN-PATIENTS TREATED  
STATES AND TERRITORIES, 1970-71**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
In-patients at beginning of year—									
Males . . . . .	9,934	n.a.	4,124	1,791	2,327	951	277	n.a.	n.a.
Females . . . . .	12,814	n.a.	4,762	2,124	2,855	1,224	336	n.a.	n.a.
Persons . . . . .	22,748	13,983	8,886	3,915	5,182	2,175	613	410	57,912
Admissions and re-admissions during year—									
Males . . . . .	266,311	n.a.	118,571	57,367	71,752	18,768	7,729	n.a.	n.a.
Females . . . . .	399,755	n.a.	150,356	78,560	87,492	28,358	9,716	n.a.	n.a.
Persons . . . . .	666,066	377,955	268,927	135,927	159,244	47,126	17,445	21,971	1,694,661
Total in-patients (cases) treated—									
Males . . . . .	276,245	n.a.	122,695	59,158	74,079	19,719	8,006	n.a.	n.a.
Females . . . . .	412,569	n.a.	155,118	80,684	90,347	29,582	10,052	n.a.	n.a.
Persons . . . . .	688,814	391,938	277,813	139,842	164,426	49,301	18,058	22,381	1,752,573
Discharges and deaths—									
Males . . . . .	266,207	n.a.	118,903	57,432	71,685	18,705	7,734	n.a.	n.a.
Females . . . . .	398,873	n.a.	150,572	78,504	87,374	28,372	9,752	n.a.	n.a.
Persons . . . . .	665,080	377,696	269,475	135,936	159,059	47,077	17,486	21,777	1,693,586
In-patients at end of year—									
Males . . . . .	10,038	n.a.	3,792	1,726	2,394	1,014	274	n.a.	n.a.
Females . . . . .	13,696	n.a.	4,546	2,180	2,973	1,210	298	n.a.	n.a.
Persons . . . . .	23,734	14,242	8,338	3,906	5,367	2,224	572	604	58,987
Average daily number resident	21,630	13,445	7,917	3,779	5,113	2,133	576	563	55,156

In addition to those admitted to the hospitals and nursing homes, there are large numbers of out-patients treated. During 1970-71 there were approximately 2,242,800 out-patients treated in New South Wales, 959,000 in Victoria, 969,000 in Queensland, 202,000 in South Australia, 417,000 in Western Australia, 149,000 in Tasmania, 80,000 in the Northern Territory (includes two clinics) and 40,000 in the Australian Capital Territory, making an estimated total for Australia of 5,058,000. The figures quoted refer to cases, as distinct from persons and attendances.

### Revenue and expenditure

Details of revenue and expenditure for the year 1970-71 are shown in the next table. 'Government aid' includes municipal aid which was shown as a separate revenue item for some States in previous Year Books. Commonwealth pharmaceutical benefits and tuberculosis allowances paid direct to the institutions have also been included as 'government aid'.

Commonwealth hospital and nursing home benefits paid direct to public hospitals and nursing homes (in either full or part payment of fees incurred by pensioners and other uninsured patients) are treated on the same basis as Commonwealth benefits used to reimburse insured patients, and included in the amounts shown for 'fees'. Details of Commonwealth expenditure on each of the different categories of hospital benefits are shown on page 429.

For some States, expenditure on capital items out of hospitals' own funds are not included in the figures shown. Comparison between the States should therefore be made with caution.

**PUBLIC HOSPITALS AND NURSING HOMES: REVENUE AND EXPENDITURE  
STATES AND TERRITORIES, 1970-71  
(\$'000)**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Revenue—									
Government aid . . . . .	144,594	97,524	40,081	35,887	48,149	16,700	6,567	4,697	394,199
Public subscriptions, legacies, etc. . . . .	190	10,545	352	784	7				11,878
Fees . . . . .	82,812	49,971	16,311	15,702	18,178	5,880	916	2,202	191,972
Other . . . . .	2,846	(a)2,872	(b)9,097	1,568	4,030	54	..	..	20,467
Total revenue . . . . .	230,442	160,912	65,842	53,942	70,364	22,633	7,483	6,899	618,517
Expenditure—									
Salaries and wages . . . . .	155,440	101,070	38,466	29,644	36,142	12,942	4,378	5,033	383,115
Upkeep and repair of buildings and grounds . . . . .	6,451	3,100		1,784	6,913	300	461	285	
All other maintenance . . . . .	53,206	36,052	18,102	11,818	18,221	4,666	1,946	1,568	164,873
Total maintenance . . . . .	215,097	140,222	56,568	43,246	61,277	17,908	6,785	6,886	547,989
Capital . . . . .	21,695	21,558	4,399	10,070	9,197	4,686	698	256	72,559
Total expenditure . . . . .	236,792	161,780	60,967	53,316	70,474	22,594	7,483	7,142	620,548

(a) Includes income from investments, income from sundry sources, special purposes medical, non-operating income  
(b) Includes loans of \$8.2 million from financial institutions.

**Summary for Australia**

A summary of statistics relating to public hospitals and nursing homes in Australia is given in the following table.

**PUBLIC HOSPITALS AND NURSING HOMES: AUSTRALIA, 1966-67 TO 1970-71**

	1966-67	1967-68	1968-69	1969-70	1970-71
Hospitals and nursing homes . . .	765	762	768	767	772
Medical staff—					
Salaried . . . . .	4,125	4,487	4,874	5,110	5,483
Other(a) . . . . .	8,724	9,249	9,565	9,704	9,813
Nursing staff(b) . . . . .	49,640	52,236	55,219	59,476	62,191
Beds and cots . . . . .	73,748	74,768	75,242	75,070	75,916
Admissions . . . . .	1,439,959	1,500,662	1,572,225	1,617,797	1,694,661
Total in-patients (cases) treated . .	1,494,709	1,554,331	1,626,998	1,673,807	1,752,573
Average daily number resident . . .	52,331	53,467	54,600	54,329	55,156
Out-patients (cases)(c) . . . . .	3,993,000	4,365,000	4,655,843	4,901,545	5,058,081
Revenue . . . . . \$'000	376,343	413,183	464,117	519,542	618,517
Expenditure . . . . . \$'000	377,457	411,869	460,393	518,536	620,548

(a) Includes honorary and visiting medical officers, who may hold appointments at more than one hospital.

(b) Qualified and student nurses, assistant nurses, assistant nurse trainees, nursing aides, and nursing aide trainees.

(c) Estimated.

**Private hospitals and nursing homes**

The figures shown in the following table refer to those private hospitals and nursing homes which have been approved for the payment of Commonwealth hospital benefits under the *National Health Act* 1953-1972. A small number of institutions classified as 'private' by the Department of Social Security are included in public hospital statistics, and these have been omitted from the following two tables. Statistical information about patients, staff and finance of these institutions is not available on a uniform Australia-wide basis.

**PRIVATE HOSPITALS AND NURSING HOMES: STATES, 1967 TO 1971**

State	30 June—				
	1967	1968	1969	1970	1971
<b>NUMBER OF PRIVATE HOSPITALS AND NURSING HOMES</b>					
New South Wales . . . . .	535	541	536	(a)546	(a)569
Victoria . . . . .	313	310	311	313	317
Queensland . . . . .	152	155	156	163	167
South Australia(b) . . . . .	184	185	187	184	184
Western Australia . . . . .	96	102	104	105	107
Tasmania . . . . .	42	43	44	47	49
Australia . . . . .	1,322	1,336	1,338	1,358	1,393

**NUMBER OF BEDS FOR PATIENTS**

New South Wales . . . . .	15,825	17,016	18,377	(a)19,665	(a)22,235
Victoria . . . . .	7,295	7,267	7,385	7,790	8,187
Queensland . . . . .	4,630	4,908	5,117	5,949	6,434
South Australia(b) . . . . .	4,361	4,542	4,778	4,908	5,146
Western Australia . . . . .	3,029	3,333	3,484	3,643	3,923
Tasmania . . . . .	1,038	1,084	1,160	1,294	1,443
Australia . . . . .	36,178	38,150	40,301	43,249	47,368

(a) Includes two institutions in the Australian Capital Territory. There were no institutions of this nature in the A.C.T. prior to 1970. (b) Includes one institution in the Northern Territory.

## Repatriation hospitals

The medical care of eligible ex-servicemen and dependants of deceased ex-servicemen is a major function of the Commonwealth Repatriation Department, which provides a comprehensive service.

In-patient treatment is provided at the six Repatriation General Hospitals (one in each State) and at seven auxiliary hospitals and sanatoria. In-patient treatment may also be provided in country hospitals at the Department's expense in certain circumstances. Mental patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Department in mental hospitals administered by the State authorities.

Details of patients, staff and expenditure on Repatriation institutions and other medical services are given in Chapter 5, Repatriation.

## Hansenide hospitals

There are three isolation hospitals in Australia for the care and treatment of persons suffering from Hansen's disease (leprosy). The numbers of isolation patients at these hospitals at 31 December 1972 were: Little Bay (New South Wales), 4; Fantome Island (North Queensland), 8; and Derby (Western Australia), 88. At 31 December 1972 there were 851 leprosy patients in the Northern Territory of whom approximately 62 were in-patients for the care and repair of deformity and not from the point of view of isolation. With the exception of the Institute of Tropical Medicine at Little Bay, nursing services are provided mostly by sisters of religious orders under supervision of Government medical officers.

Special wards for the isolation and treatment of leprosy patients are also provided at other centres. The location of these wards and the number of isolation patients resident at 31 December 1972, were: Fairfield (Victoria), 6; Princess Alexandra Hospital (Queensland), 3.

## Mental health institutions

The presentation of meaningful statistics of mental health services has become increasingly difficult because of changes in recent years in the institutions and services for the care of mental patients. The emphasis has shifted from institutions for care of patients certified insane to a range of mental health services provided for in-patients and out-patients at psychiatric hospitals, admission and reception centres, day hospitals, out-patient clinics, training centres, homes for the mentally retarded and geriatric patients, psychiatric units in general hospitals, and the like.

### In-patient institutions

The following table shows the number of major in-patient institutions in each State in 1971, the accommodation they provide for patients, and staff. In-patient care for voluntary patients is also provided at many general public and a number of private hospitals. There are also psychiatric units attached to gaols, juvenile corrective centres and similar institutions. Only the following institutions, under the control of the State mental health authorities, are included in this table: *New South Wales*—the fifteen State psychiatric centres (a psychiatric hospital and associated admission centre being regarded as one psychiatric centre) and the four authorised private psychiatric hospitals (several other institutions provide in-patient care for voluntary patients only, but are excluded from the scope of the statistics); *Victoria*—the seven psychiatric hospitals, ten mental hospitals, six informal hospitals, and nine intellectual deficiency training centres; *Queensland*—five psychiatric hospitals, three training centres, and one rehabilitation clinic; *South Australia*—six in-patient institutions; *Western Australia*—the three approved mental hospitals and two training centres; and *Tasmania*—the Royal Derwent hospital.

MENTAL HEALTH: IN-PATIENT INSTITUTIONS, ACCOMMODATION AND STAFF  
STATES AT 30 JUNE 1971

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
In-patient institutions .	19	(a)32	9	6	5	1	72
Beds and cots for patients	9,929	(b)8,858	3,919	2,161	1,538	1,030	27,435
Staff—Medical . . .	225	(a)166	(c)27	51	23	10	502
Nursing(d) . . .	3,827	(a)3,061	1,439	701	682	360	10,070

(a) At 30 November 1971. (b) The number of beds and cots occupied on 30 November 1971. (c) Full-time staff and full-time equivalent of part-time staff. (d) Includes attendants.



There are no separate in-patient institutions for mental patients in the Northern Territory or the Australian Capital Territory. With the appointment of a Director of Psychiatric Services the organisation of a psychiatric service was begun in the Australian Capital Territory in 1967-68.

### Patients

The following table sets out statistics of in-patients under the care of the respective State mental health services.

IN-PATIENTS AT MENTAL HEALTH INSTITUTIONS, 1970-71

	N.S.W.	Vic. (a)(b)	Qld	S.A.	W.A.	Tas.	Aust.
In-patients at beginning of year—							
Males . . . . .	5,888	(c)5,427	2,354	1,215	1,399	484	16,767
Females . . . . .	4,661	(c)4,947	1,468	1,054	895	484	13,509
Persons . . . . .	10,549	(c)10,374	3,822	2,269	2,294	968	30,276
Admissions and re-admissions during year—							
Males . . . . .	9,636	6,475	2,089	1,932	1,543	493	22,168
Females . . . . .	8,811	6,155	835	1,595	1,159	404	18,959
Persons . . . . .	18,447	12,630	2,924	3,527	2,702	897	41,127
Total in-patients (cases) treated—							
Males . . . . .	15,524	11,902	4,443	3,147	2,942	977	38,935
Females . . . . .	13,472	11,102	2,303	2,649	2,054	888	32,468
Persons . . . . .	28,996	23,004	6,746	5,796	4,996	1,865	71,403
Discharges, including deaths—							
Males . . . . .	9,864	6,484	2,007	1,950	1,446	510	22,261
Females . . . . .	9,206	6,351	838	1,653	1,047	415	19,510
Persons . . . . .	19,070	12,835	2,845	3,603	2,493	925	41,771
In-patients at end of year—							
Males . . . . .	5,660	5,418	2,436	1,197	1,496	467	16,674
Females . . . . .	4,266	4,751	1,465	996	1,007	473	12,958
Persons . . . . .	9,926	10,169	3,901	2,193	2,503	940	29,632

(a) Eleven months ended 30 November 1971.  
1 January 1971.

(b) Includes transfers from one institution to another.

(c) At

### State government expenditure on mental health services

The following figures show particulars of expenditure by States for the year 1970-71. Maintenance expenditure represents expenditure on wages and salaries, upkeep and repair of buildings and grounds, and other maintenance. The figure for New South Wales relates to the 15 State psychiatric centres and the Master in Protective Jurisdiction of the Supreme Court. Capital expenditure is expenditure as approved under the *State Grants (Mental Health Institutions) Act* 1964 only, and excludes the Commonwealth contributions paid under this Act—see page 439.

MENTAL HEALTH: EXPENDITURE, STATES, 1970-71  
(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	All States
Maintenance . . . . .	33,270	29,610	10,315	7,946	7,445	2,941	91,527
Capital . . . . .	2,828	1,596	928	1,818	790	438	8,398

### Notifiable diseases

#### Methods of prevention and control

Provision exists in the Health Acts of all States for the compulsory notification of certain infectious and other diseases and for the application of preventive measures. When any such disease occurs the local authority must be notified at once, and in some States notification must be made also to the Health Department.

As a rule, the local authorities are required to report from time to time to the Central Board of Health in each State on the health, cleanliness and general sanitary state of their several districts and on the appearance of certain diseases. Regulations provide for the disinfection and cleansing of premises and for the disinfection or destruction of bedding, clothing or other articles which have been exposed to infection. Regulations also provide that persons suspected to be suffering from, or to be carriers of, infectious disease must submit to clinical and laboratory examination. Persons suffering from certain diseases, for example, smallpox, are detained in isolation.

#### Notifiable diseases and cases notified, 1972

The following table shows, by State and Territory, the number of cases notified in 1972 for those diseases notifiable in all States and Territories. In May 1965 the National Health and Medical Research Council at its Fifty-ninth Session proposed a basic list of diseases to be notifiable in each State and Territory, and this table is based upon that proposal. The table does not include all diseases which are notifiable in a State or Territory. Factors such as the following affect both the completeness of the figures and the comparability from State to State and from year to year: availability of medical and diagnostic services; varying degrees of attention to notification of diseases; and enforcement and follow-up of notifications by Health Departments.

NOTIFIABLE DISEASES(a): NUMBER OF CASES NOTIFIED  
STATES AND TERRITORIES, 1972

Disease	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Anthrax . . . . .	2	9	..	..	..	..	..	..	11
Brucellosis . . . . .	23	30	7	5	..	..	..	1	66
Cholera . . . . .	14	21	2	..	..	2	1	1	41
Diphtheria . . . . .	9	2	45	3	2	..	..	..	61
Gonorrhoea . . . . .	3,698	2,232	2,039	989	1,469	149	404	57	11,037
Infectious hepatitis . . . . .	2,211	1,226	(b)1,379	630	389	93	133	57	6,118
Hansen's disease (Leprosy) . . . . .	..	3	4	1	10	..	21	..	39
Hydatid . . . . .	10	4	1	10	..	6	..	..	31
Leptospirosis . . . . .	11	..	48	3	2	2	1	..	67
Malaria . . . . .	44	20	45	25	14	..	28	13	189
Ornithosis . . . . .	3	3	3	1	..	..	..	..	10
Paratyphoid fever . . . . .	..	..	..	5	..	2	..	..	7
Poliomyelitis . . . . .	..	3	..	..	4	..	..	..	7
Syphilis . . . . .	328	112	231	205	258	7	74	2	1,217
Tetanus . . . . .	9	5	3	..	..	1	..	..	18
Tuberculosis . . . . .	480	371	(c)229	121	144	48	61	21	1,475
Typhoid fever . . . . .	4	8	1	..	2	..	..	..	15
Typhus (all forms) . . . . .	..	..	2	..	1	..	..	..	3

(a) No cases of plague, smallpox or yellow fever were notified.  
(c) Includes erythema nodosum and pleural effusion.

(b) Includes hepatitis, serum (homologous).

*New infectious hepatitis cases notified.* The following table shows the number of cases of infectious hepatitis notified in each State and Territory during the years 1968 to 1972.

INFECTIOUS HEPATITIS: CASES NOTIFIED  
STATES AND TERRITORIES, 1968 TO 1972

State or Territory	1968	1969	1970	1971	1972
New South Wales . . . . .	2,526	2,820	2,851	2,615	2,211
Victoria . . . . .	2,362	2,364	2,401	1,895	1,226
Queensland(a) . . . . .	1,819	886	1,000	1,258	1,379
South Australia . . . . .	558	615	485	504	630
Western Australia . . . . .	147	146	166	554	389
Tasmania . . . . .	589	493	318	287	93
Northern Territory . . . . .	66	74	229	296	133
Australian Capital Territory . . . . .	56	52	121	100	57
<b>Australia . . . . .</b>	<b>8,123</b>	<b>7,450</b>	<b>7,571</b>	<b>7,509</b>	<b>6,118</b>

(a) Includes hepatitis, serum (homologous).

*New tuberculosis cases notified.* The following table gives particulars of the number of new cases of tuberculosis notified in Australia for 1972.

**TUBERCULOSIS: NEW CASES NOTIFIED(a)  
STATES AND TERRITORIES, 1972**

State or Territory	Age group (years)					Total
	0-14	15-34	35-54	55 and over	Not stated	
New South Wales . . . .	26	83	191	180	..	480
Victoria . . . . .	28	87	116	140	..	371
Queensland(b) . . . .	15	24	88	102	..	229
South Australia . . . .	15	14	39	53	..	121
Western Australia . . .	17	21	52	54	..	144
Tasmania . . . . .	5	12	18	13	..	48
Northern Territory . . .	1	18	27	15	..	61
Australian Capital Territory	2	3	13	3	..	21
<b>Australia . . . . .</b>	<b>109</b>	<b>262</b>	<b>544</b>	<b>560</b>	<b>..</b>	<b>1,475</b>

(a) Figures supplied by the Director of Tuberculosis in each State and the Commonwealth Department of Health. (b) Includes erythema nodosum and pleural effusion.

### Chronic illnesses, injuries, and impairments

As part of the quarterly population survey (see Chapter 20, Employment and Unemployment) a survey was conducted in May 1968, in all States except Victoria, in order to obtain estimates of the incidence of chronic illnesses, injuries and impairments in the population, the nature of these conditions and their cause (e.g. whether they were congenital or due to war, accident, etc.). In addition, the survey obtained information on the effect of these conditions on the activities of those who suffered from them.

Estimates derived from the survey were published in a mimeographed bulletin *Chronic Illnesses, Injuries and Impairments, May 1968* (Ref. No. 17.3). A summary of the principal results is given in the Appendix to Year Book No. 56.

### Disposal of dead by cremation

The first crematorium in Australia was opened in South Australia in 1903. At 31 December 1972 there were thirty crematoria in Australia, situated as follows: New South Wales, 14; Victoria, 4; Queensland, 5; South Australia, 2; Western Australia, 2; Tasmania, 2; Australian Capital Territory, 1. There is no crematorium in the Northern Territory. The following table shows the number of cremations and total deaths in each State and Territory for each of the years 1968 to 1972.

**CREMATIONS AND TOTAL DEATHS: STATES AND TERRITORIES(a), 1968 TO 1972**

State or Territory	1968		1969		1970		1971		1972	
	Crema-tions	Total deaths	Crema-tions	Total deaths	Crema-tions	Total deaths	Crema-tions	Total deaths	Crema-tions	Total deaths
New South Wales . . . .	18,749	41,803	18,564	40,655	20,087	43,601	19,966	41,691	20,117	41,652
Victoria . . . . .	10,939	29,967	10,617	28,976	11,265	30,335	11,134	30,598	11,226	29,856
Queensland . . . . .	5,686	16,078	5,733	15,786	6,303	17,055	6,203	16,339	6,269	16,598
South Australia . . . .	2,476	9,916	2,464	9,337	2,884	10,138	2,917	9,686	3,182	9,764
Western Australia . . .	2,548	7,470	2,590	7,350	2,826	7,543	2,996	7,806	3,013	7,441
Tasmania . . . . .	1,049	3,284	1,066	3,309	1,039	3,174	1,157	3,295	1,135	3,227
Northern Territory . . .	..	543	..	485	..	608	..	637	..	553
Australian Capital Territory	235	488	309	588	338	594	341	598	374	669
<b>Australia . . . . .</b>	<b>41,682</b>	<b>109,549</b>	<b>41,343</b>	<b>106,486</b>	<b>44,742</b>	<b>113,048</b>	<b>44,714</b>	<b>110,650</b>	<b>45,316</b>	<b>109,760</b>

(a) Cremations are not necessarily carried out in the State or Territory where the death was registered.





## CHAPTER 15

### LAW, ORDER, AND PUBLIC SAFETY

This chapter provides summary information about criminal and civil court proceedings (including divorce and bankruptcy); selected crime reported or becoming known to the police; police strengths; prisons; expenditure on law and order; fire brigades; and patents, trademarks and copyright. The main sources of further information for individual States are the State Year Books and Statistical Registers, and the annual reports of the relevant justice authorities. *See also* Year Book No. 55, 1969, page 456, for short descriptions of the National Safety Council of Australia, lifesaving organisations, the Royal Humane Society and the Order of St. John.

The statistics in this chapter are influenced by a number of factors which affect comparability from State to State and from year to year, such as differences in the jurisdiction of courts; changes in the law in particular States and differences in the laws between States; differences in the methods of compiling the figures (e.g. in respect of persons convicted for more than one offence); the prevailing attitude to laws such as those connected with liquor, vagrancy, gaming, and traffic offences; and the strength and distribution of the police forces.

Details of the development and structure of the State, Territory, and Commonwealth legal systems are given in Year Book No. 55, pages 565-7 and Year Book No. 56, page 441. The only notable changes since then occurred in South Australia and New South Wales. In South Australia the Local Courts Act Amendment Act, 1969 came into effect on 20 August 1970. It provides for the establishment of District Criminal Courts. Provision has been made for the division of the State into districts and for the appointment by the Senior Judge, of judges known as Recorders, to courts in each of these Districts. Under the Act the District Court has the jurisdiction and powers of the Supreme Court in respect of indictable offences except for capital offences and for felonies and misdemeanors where the maximum punishment is imprisonment exceeding ten years.

In New South Wales the Supreme Court Act, 1970 came into force on 1 July 1972. The Act provides for the concurrent administration of law and equity in the Supreme Court which will have the effect of bringing the New South Wales civil procedure in the Supreme Court in line with the other Australian States which have had concurrent administration from as early as 1876. Equitable reliefs and defences which could formerly only be pleaded in the Supreme Court exercising jurisdiction in equity can now be heard together with common law claims and defences in the one jurisdiction. The general scope of the Act will enable a suitor to obtain by one proceeding, the same ultimate result as he would previously have obtained either by having selected the right jurisdiction or after having been to each jurisdiction in succession. The Law Reform (Law and Equity) Act, 1972, which also commenced on 1 July 1972, provides that if any conflict or variance arises between the rules of equity and common law with reference to the same matter, the rules of equity will prevail. This principle extends, where applicable, to the inferior courts.

#### Lower (magistrates') courts

Particulars of the powers of magistrates, and of special provisions for dealing with juvenile offenders in special courts in the various States and Territories are given in Year Book No. 55, pages 567 to 571. The statistics in the following tables are influenced by the factors listed at the beginning of this chapter and, in particular by differences in the jurisdiction of lower courts in the various States.

#### Criminal proceedings

The number of charges heard at magistrates' courts in each State and Territory in the years 1967 to 1971 are given in the following table. The statistics relate to individual offences for which persons were charged, except for Queensland where proceedings against a person for a number of offences at the one hearing are counted as one charge.

**MAGISTRATES' COURTS(a): CHARGES HEARD, STATES AND TERRITORIES  
1967 TO 1971(b)**

<i>State or Territory</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
New South Wales . . .	336,746	337,540	361,377	390,233	427,560
Victoria . . .	318,172	326,445	341,284	339,019	339,527
Queensland(c)(d) . . .	95,155	100,046	107,375	110,803	110,883
South Australia(c) . . .	98,588	117,081	118,877	125,867	123,303
Western Australia . . .	76,458	86,836	93,157	88,940	101,077
Tasmania . . .	36,550	35,077	32,587	32,880	38,046
Northern Territory . . .	10,336	10,459	13,718	14,695	21,329
Australian Capital Territory . . .	7,318	7,647	6,685	(e)10,326	(e)11,416
<b>Australia . . . . .</b>	<b>979,323</b>	<b>1,021,131</b>	<b>1,075,060</b>	<b>1,112,763</b>	<b>1,173,141</b>

(a) Includes Children's Court, except for Darwin Children's Court in the Northern Territory prior to 1970. (b) Excludes minor traffic offences settled without court proceedings. (c) Year ended 30 June. (d) A person charged on several counts at the one hearing is included only once. (e) Includes remand cases, adjournments and court orders not collected in previous years.

Differences between States in the preceding table, and within States over a period of time are influenced by the large number of traffic offences and the arrangements which have been introduced at various times for dealing with them. Provision exists in the States and the internal Territories for settlement of parking and minor traffic offences by payment of fines without court proceedings. The numbers involved are shown in the next table.

**MINOR TRAFFIC OFFENCES SETTLED BY PAYMENT OF FINES  
WITHOUT COURT PROCEEDINGS, STATES AND TERRITORIES 1967 TO 1971**

<i>State or Territory</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
New South Wales . . .	411,447	426,496	418,626	456,798	511,005
Victoria . . .	343,432	410,857	443,222	477,332	544,663
Queensland(a) . . .	264,617	253,429	236,320	235,477	257,709
South Australia(a) . . .	240,014	239,619	267,709	244,120	277,464
Western Australia . . .	62,827	83,146	117,436	154,307	176,994
Tasmania . . .	45,081	55,677	56,076	62,408	76,062
Northern Territory(b) . . .	n.a.	n.a.	n.a.	8,438	10,444
Australian Capital Territory . . .	6,765	4,430	4,340	5,282	7,229
<b>Total . . . . .</b>	<b>1,374,183</b>	<b>1,473,654</b>	<b>1,543,729</b>	<b>1,644,162</b>	<b>1,861,570</b>

(a) Year ended 30 June. (b) No provision for settlement of parking and minor traffic offences by payment of fines without court proceedings existed in the Northern Territory prior to 1970.

The following tables show the number of cases dealt with in magistrates' courts in which convictions were made.

**CASES AT MAGISTRATES' COURTS(a) IN WHICH CONVICTIONS WERE MADE, BY  
CLASS OF OFFENCE: STATES AND TERRITORIES, 1971**

<i>Class of offence</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld (b)(c)</i>	<i>S.A. (b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Against the person . . .	5,294	4,355	904	898	1,680	628	445	205	14,409
Against property . . .	36,992	29,863	6,468	7,113	17,919	4,209	1,225	749	104,538
Forgery and offences against the currency . . .	1,905	526	1	29	177	236	81	115	3,070
Against good order . . .	84,156	34,020	32,620	14,205	23,070	1,948	10,665	673	201,357
Other(d) . . .	238,354	222,905	52,657	88,298	50,702	25,010	7,631	7,198	692,755
<b>Total . . . . .</b>	<b>366,701</b>	<b>291,669</b>	<b>92,650</b>	<b>110,543</b>	<b>93,548</b>	<b>32,031</b>	<b>20,047</b>	<b>8,940</b>	<b>1,016,129</b>

(a) Includes Children's Courts. (b) Year ended 30 June. (c) A person convicted on several counts at the one hearing is included only once. (d) Includes traffic offences other than minor traffic offences settled without court proceedings.



**CASES AT MAGISTRATES' COURTS(a) IN WHICH CONVICTIONS WERE MADE  
STATES AND TERRITORIES(b), 1967 TO 1971**

<i>State or Territory</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
New South Wales . . .	297,697	290,616	309,297	337,563	366,701
Victoria . . .	286,316	291,821	297,574	294,554	291,669
Queensland(c)(d) . . .	82,271	85,363	89,041	91,198	92,650
South Australia(c) . . .	87,110	105,027	105,966	114,499	110,543
Western Australia . . .	72,798	81,892	85,956	79,899	93,548
Tasmania . . .	31,525	30,100	26,515	26,571	32,031
Northern Territory . . .	9,437	9,416	12,543	13,528	20,047
Australian Capital Territory . . .	6,021	6,947	5,681	6,620	8,940
<b>Australia . . .</b>	<b>873,175</b>	<b>901,182</b>	<b>932,573</b>	<b>964,432</b>	<b>1,016,129</b>

(a) Includes Children's Courts except for Darwin Children's Court in the Northern Territory prior to 1970. (b) Excludes minor traffic offences settled without court proceedings. (c) Year ended 30 June. (d) A person convicted on several counts at the one hearing is included only once.

The number of cases in which convictions for drunkenness were recorded during each of the years 1967 to 1971 are given in the following table.

**DRUNKENNESS CASES(a) IN WHICH CONVICTIONS WERE MADE  
STATES AND TERRITORIES, 1967 TO 1971**

<i>State or Territory</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
New South Wales . . .	55,134	57,710	59,048	58,606	58,733
Victoria . . .	23,855	24,338	25,582	25,054	25,820
Queensland(b)(c) . . .	29,530	28,409	28,140	31,259	29,878
South Australia(b) . . .	6,109	6,889	7,528	9,650	9,365
Western Australia . . .	10,722	11,146	11,970	12,612	16,197
Tasmania . . .	481	501	598	541	716
Northern Territory . . .	4,598	5,216	(e)6,566	6,675	8,217
Australian Capital Territory . . .	313	316	388	572	393
<b>Australia . . .</b>	<b>130,742</b>	<b>134,525</b>	<b>139,820</b>	<b>144,969</b>	<b>149,319</b>

(a) Includes Children's Courts except for Darwin Children's Court in the Northern Territory prior to 1970. (b) Year ended 30 June. (c) A person convicted on several counts at the one hearing is included only once. (e) Includes Children's Courts except for Darwin Children's Court in the Northern Territory prior to 1970.

**Convictions for certain serious offences at lower (magistrates') courts**

The figures given in the preceding tables refer to all convictions, and include offences of a technical nature, drunkenness, and minor breaches of good order, which come under the heading of crime in a very different sense from the more serious offences. The following table has therefore been prepared to show convictions at magistrates' courts for the years 1967 to 1971 for offences against the person, offences against property, forgery, and offences against the currency.

**CONVICTIONS FOR CERTAIN SERIOUS OFFENCES(a) AT MAGISTRATES'  
COURTS(b): STATES AND TERRITORIES, 1967 TO 1971**

<i>State or Territory</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
New South Wales . . .	35,809	37,367	40,583	40,642	44,191
Victoria . . .	27,355	26,338	30,286	33,025	34,744
Queensland(c)(d) . . .	6,789	6,604	6,865	7,525	7,373
South Australia(c) . . .	5,180	5,817	6,678	7,349	8,040
Western Australia . . .	10,207	12,065	13,622	15,925	19,776
Tasmania . . .	3,278	3,650	3,597	3,813	5,073
Northern Territory . . .	818	941	1,397	1,517	1,751
Australian Capital Territory . . .	895	1,133	970	729	1,069
<b>Australia . . .</b>	<b>90,331</b>	<b>93,915</b>	<b>103,998</b>	<b>110,525</b>	<b>122,017</b>

(a) Offences against the person, offences against property, forgery, and offences against the currency. (b) Includes Children's Courts except for Darwin Children's Court in the Northern Territory prior to 1970. (c) Year ended 30 June. (d) A person convicted on several counts at the one hearing is included only once.

**Committals to higher (judges') courts**

In the case of other than minor offences a preliminary hearing is held before a stipendiary magistrate or justice of the peace for the purpose of determining whether a *prima facie* case has been made out. If the magistrate or justice of the peace finds that there is a case to answer, the person charged is committed for trial at a higher court. The numbers of such committals are shown in the following tables.

**COMMITTALS TO HIGHER COURTS(a), BY CLASS OF OFFENCE: STATES AND TERRITORIES, 1971**

<i>Class of offence</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i> (b)(c)	<i>S.A.</i> (b)	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Against the person .	2,033	1,281	560	302	203	140	31	52	4,602
Against property .	7,816	4,053	1,587	490	1,046	831	55	85	15,963
Forgery and offences against the currency .	747	848	1	10	211	44	29	33	1,923
Against good order .	291	56	16	26	17	7	..	..	413
Other .	168	472	8	45	30	34	1	9	767
<b>Total</b> .	<b>11,055</b>	<b>6,710</b>	<b>2,172</b>	<b>873</b>	<b>1,507</b>	<b>1,056</b>	<b>116</b>	<b>179</b>	<b>23,668</b>

(a) Includes committals from Children's Courts. counts at the one hearing is included only once.

(b) Year ended 30 June.

(c) A person committed on several

**COMMITTALS TO HIGHER COURTS(a): STATES AND TERRITORIES  
1967 TO 1971**

<i>State or Territory</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
New South Wales .	7,954	8,229	9,793	9,173	11,055
Victoria .	5,655	6,192	5,515	6,446	6,710
Queensland(b)(c) .	1,611	1,428	1,579	1,733	2,172
South Australia(b) .	713	726	749	742	873
Western Australia .	609	1,037	950	1,270	1,507
Tasmania .	549	716	747	1,012	1,056
Northern Territory .	176	196	241	151	116
Australian Capital Territory .	170	240	219	278	179
<b>Australia</b> .	<b>17,437</b>	<b>18,764</b>	<b>19,793</b>	<b>20,805</b>	<b>23,668</b>

(a) Includes committals from Children's Courts except for Darwin Children's Court in the Northern Territory prior to 1970. (b) Year ended 30 June. (c) A person committed on several counts at the one hearing is included only once.

**Higher (judges') courts**

Higher courts are presided over by a judge, sometimes with a jury. The general jurisdiction of the higher courts in the States and Territories, which for this purpose include District, County and Supreme Courts, includes appeals from the lower courts, cases of serious crime committed for trial or sentence by lower courts, and civil cases involving common law, commercial causes, equity, etc. Under the Commonwealth *Matrimonial Causes Act* 1959-1966, the Supreme Courts of the various States and Territories have exclusive jurisdiction in matrimonial causes, and under the *Bankruptcy Act* 1966-1970, the Federal Court of Bankruptcy, the Supreme Courts of New South Wales, Queensland, Western Australia, Tasmania and the Northern Territory, and the Courts of Insolvency in Victoria and South Australia, can deal with bankruptcy cases. However, the Federal Court handles bankruptcy cases in New South Wales and Victoria.

Proceedings at higher courts include therefore criminal, civil, divorce, and bankruptcy proceedings. Separate details of all except civil proceedings are given in the following paragraphs.

**Criminal proceedings**

The statistics in the following tables are influenced by the factors listed in the second paragraph at the beginning of this chapter.

**PERSONS CONVICTED<sup>(a)</sup> AT HIGHER COURTS: BY NATURE OF OFFENCE: STATES AND TERRITORIES, 1971**

<i>Offence</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld(b)</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Against the person—</b>									
Murder . . . . .	18	11	2	5	6	..	5	1	48
Attempted murder . . . . .	3	3	4	4	3	1	..	..	18
Manslaughter(c) . . . . .	33	16	10	2	18	4	4	..	87
Culpable driving . . . . .	59	16	39	2	3	4	1	2	126
Rape . . . . .	58	31	26	5	14	6	4	4	148
Other offences against females . . . . .	396	237	138	153	5	26	6	11	972
Abduction . . . . .	8	13	2	4	4	1	..	..	32
Unnatural offences . . . . .	65	62	31	22	8	6	1	..	195
Abortion and attempt to procure . . . . .	8	3	..	1	..	..	..	..	12
Bigamy . . . . .	9	1	4	2	3	1	..	1	21
Malicious wounding and aggravated assault . . . . .	173	67	89	16	36	6	3	9	399
Common assault . . . . .	65	19	5	3	..	9	5	2	108
Other offences against the person . . . . .	14	9	3	12	8	7	5	1	59
<i>Total, against the person</i> . . . . .	<i>909</i>	<i>488</i>	<i>353</i>	<i>231</i>	<i>108</i>	<i>71</i>	<i>34</i>	<i>31</i>	<i>2,225</i>
<b>Against property—</b>									
Burglary, breaking and entering . . . . .	1,421	404	825	457	509	120	50	35	3,821
Robbery and stealing from the person . . . . .	250	140	93	36	27	156	9	5	716
Embezzlement and larceny by servants . . . . .	91	53	11	20	15	..	1	2	193
Other larceny(d) . . . . .	777	241	196	20	35	..	11	6	1,286
Receiving . . . . .	179	41	159	9	14	13	1	3	419
Fraud and false pretences . . . . .	175	57	30	16	8	13	..	5	304
Arson . . . . .	39	8	23	3	5	5	..	..	84
Malicious damage . . . . .	29	31	20	2	..	..	3	2	87
Other offences against property . . . . .	24	..	1	6	1	..	..	..	32
<i>Total, against property</i> . . . . .	<i>2,985</i>	<i>975</i>	<i>1,358</i>	<i>569</i>	<i>614</i>	<i>307</i>	<i>76</i>	<i>58</i>	<i>6,942</i>
Forgery and offences against the currency . . . . .	42	97	..	13	14	6	3	4	179
Against good order . . . . .	7	7	3	..	5	..	1	..	23
Other . . . . .	81	238	6	118	14	17	..	1	475
<b>Grand total</b> . . . . .	<b>4,024</b>	<b>1,805</b>	<b>1,720</b>	<b>931</b>	<b>755</b>	<b>401</b>	<b>114</b>	<b>94</b>	<b>9,844</b>

(a) A person convicted on several counts at the one hearing is classified according to the most serious offence and is included only once. (b) Year ended 30 June. (c) Includes causing death by dangerous driving. (d) Includes unlawfully using vehicles.

**PERSONS CONVICTED<sup>(a)</sup> AT HIGHER COURTS: STATES AND TERRITORIES, 1967 TO 1971**

<i>State or Territory</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
New South Wales . . . . .	3,126	3,254	3,609	3,804	4,024
Victoria . . . . .	1,786	1,790	1,689	1,752	1,805
Queensland(b) . . . . .	1,279	1,160	1,610	1,402	1,720
South Australia . . . . .	707	692	712	694	931
Western Australia . . . . .	357	507	518	693	755
Tasmania . . . . .	254	243	292	337	401
Northern Territory . . . . .	65	88	120	87	114
Australian Capital Territory . . . . .	69	86	68	96	94
<b>Australia</b> . . . . .	<b>7,643</b>	<b>7,820</b>	<b>8,618</b>	<b>8,865</b>	<b>9,844</b>

(a) See footnote (a) in table above. (b) Year ended 30 June.

**Capital punishment**

There were no executions in Australia in 1972. For a brief account of the law relating to capital punishment in Australia, see Year Book No. 55, page 573.



### Divorce and other matrimonial causes

A description of Commonwealth legislation governing divorce and other matrimonial causes in Australia is contained in Year Book No. 55, page 580. Under this legislation a court may grant decrees of dissolution of marriage (divorce), nullity of marriage, judicial separation, restitution of conjugal rights, and jactitation of marriage (i.e., that a person should refrain from making a false claim that a marriage has taken place between him and another person). Orders may be made for maintenance, the custody and welfare of children, and settlement of property, and damages for adultery. The following statistics refer only to petitions for, and decrees of, dissolution, nullity, and judicial separation. Detailed statistics are published in the annual *Divorce* bulletin (13.1), and the annual *Demography* bulletin (4.9).

#### Petitions filed

Statistics of petitions exclude cross-petitions contained in answers by respondents. The following table shows the number of petitions for dissolution of marriage, nullity of marriage, and judicial separation filed in each State and Territory during 1972.

#### PETITIONS FILED FOR DISSOLUTION, NULLITY, AND JUDICIAL SEPARATION STATES AND TERRITORIES, 1972

Petition for—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Dissolution—									
By husband . . .	2,800	1,748	789	727	750	237	69	119	7,239
By wife . . .	5,044	2,755	1,264	1,250	878	287	61	192	11,731
Total . . .	7,844	4,503	2,053	1,977	1,628	524	130	311	18,970
Nullity—									
By husband . . .	6	1	..	4	1	..	..	2	14
By wife . . .	25	10	4	2	4	1	..	..	46
Total . . .	31	11	4	6	5	1	..	2	60
Dissolution or nullity—									
By husband . . .	1	5	..	3	..	..	..	..	9
By wife . . .	6	10	..	1	..	..	..	..	17
Total . . .	7	15	..	4	..	..	..	..	26
Judicial separation—									
By husband . . .	..	1	..	..	..	..	..	1	2
By wife . . .	14	3	..	6	1	..	1	1	26
Total . . .	14	4	..	6	1	..	1	2	28
All petitions—									
By husband . . . No.	2,807	1,755	789	734	751	237	69	122	7,264
per cent . . .	36	39	38	37	46	45	53	39	38
By wife . . . No.	5,089	2,778	1,268	(a)1,263	883	288	62	193	(a)11,824
per cent . . .	64	61	62	63	54	55	47	61	62
Grand total . . .	7,896	4,533	2,057	(a)1,997	1,634	525	131	315	(a)19,088

(a) Includes 4 petitions for dissolution or judicial separation.

**Decrees granted**

Statistics of decrees granted refer to decrees *nisi* made absolute except for the following cases, where no decree *nisi* is granted.

- (i) Decrees of judicial separation, which do not dissolve the marriage and may be discharged on resumption of cohabitation.
- (ii) Decrees of nullity of void marriage, as distinct from nullity of voidable marriage. A void marriage is invalid because of failure to meet a legal requirement, and the original decree of nullity is final. A valid marriage is voidable on proof of one or more of the grounds set out in Section 21 of the *Matrimonial Causes Act 1959-1966*, e.g. that either party is incapable of consummating the marriage.

The following tables show the number of dissolutions of marriage, nullities of marriage, and judicial separations granted in each State and Territory during 1972 classified according to petitioner, and the grounds on which decrees were granted during the years 1968 to 1972.

**DECREES FOR DISSOLUTION, NULLITY, AND JUDICIAL SEPARATION  
STATES AND TERRITORIES, 1972**

<i>Decree of—</i>		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Dissolution—</b>										
To husband . . .		2,510	1,394	650	479	571	200	47	97	5,948
To wife . . .		4,518	2,179	1,081	756	672	242	41	128	9,617
To both . . .		8	11	..	..	..	..	..	..	19
<i>Total</i> . . .		7,036	3,584	1,731	1,235	1,243	442	88	225	15,584
<b>Nullity—</b>										
To husband . . .		8	3	1	2	1	..	..	..	15
To wife . . .		18	6	4	2	..	4	..	..	34
<i>Total</i> . . .		26	9	5	4	1	4	..	..	49
<b>Judicial separation—</b>										
To husband . . .		..	..	..	..	..	..	..	..	..
To wife . . .		..	..	1	2	..	..	..	..	3
<i>Total</i> . . .		..	..	1	2	..	..	..	..	3
<b>All decrees—</b>										
To husband . . .	No.	2,518	1,397	651	481	572	200	47	97	5,963
	per cent	36	39	38	39	46	45	53	43	38
To wife . . .	No.	4,536	2,185	1,086	760	672	246	41	128	9,654
	per cent	64	61	62	61	54	55	47	57	62
To both . . .	No.	8	11	..	..	..	..	..	..	19
<b>Grand total</b> . . .		7,062	3,593	1,737	1,241	1,244	446	88	225	15,636

**DECREES FOR DISSOLUTION, NULLITY, AND JUDICIAL  
SEPARATION, GROUNDS, AUSTRALIA, 1968 TO 1972**

<i>Ground</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>	<i>1972</i>
<b>DISSOLUTION</b>					
<b>Single grounds—</b>					
Desertion . . . . .	4,863	4,730	5,098	5,076	5,814
Adultery . . . . .	2,611	2,916	3,419	3,977	5,088
Separation . . . . .	1,959	1,758	2,023	2,243	2,442
Cruelty . . . . .	670	750	942	983	1,368
Drunkenness . . . . .	150	136	142	165	203
Intoxication by drugs . . . . .	3	4	5	4	5
Non-compliance with res- titution decree . . . . .	5	5	2	1	3
Refusal to consummate . . . . .	39	32	42	29	39
Insanity . . . . .	7	7	6	3	1
Frequent convictions . . . . .	18	18	25	15	19
Imprisonment . . . . .	4	3	3	8	7
Other single grounds . . . . .	24	15	15	20	19
<b>Dual grounds—</b>					
Desertion and adultery . . . . .	68	102	90	87	80
Desertion and separation . . . . .	88	145	96	79	106
Desertion and cruelty . . . . .	44	77	59	49	68
Desertion and drunkenness . . . . .	16	8	14	10	10
Desertion and failure to pay maintenance . . . . .	6	5	3	6	2
Desertion and other . . . . .	5	4	7	5	3
Adultery and separation . . . . .	1	3	4	3	7
Adultery and cruelty . . . . .	12	16	17	14	26
Adultery and other . . . . .	2	2	2	1	3
Separation and other . . . . .	1	2	3	..	3
Cruelty and drunkenness . . . . .	118	143	160	146	237
Cruelty and other . . . . .	2	7	5	1	3
Other dual grounds . . . . .	2	3	1	8	6
<b>Three grounds or more . . . . .</b>	<b>13</b>	<b>39</b>	<b>15</b>	<b>14</b>	<b>22</b>
<i>Total . . . . .</i>	<i>10,731</i>	<i>10,930</i>	<i>12,198</i>	<i>12,947</i>	<i>15,584</i>
<b>NULLITY</b>					
Bigamy . . . . .	18	14	15	23	9
Invalid marriage . . . . .	2	1	..	1	3
Incapacity to consummate . . . . .	23	28	29	15	34
Other grounds . . . . .	1	3	1	4	3
<i>Total . . . . .</i>	<i>44</i>	<i>46</i>	<i>45</i>	<i>43</i>	<i>49</i>
<b>JUDICIAL SEPARATION</b>					
Desertion . . . . .	1	..	..	1	..
Adultery . . . . .	9	1	3	2	2
Cruelty . . . . .	3	5	..	5	1
Other grounds . . . . .	3	2	3	4	..
<i>Total . . . . .</i>	<i>16</i>	<i>8</i>	<i>6</i>	<i>12</i>	<i>3</i>
<b>ALL DECREES</b>					
<b>Grand total . . . . .</b>	<b>10,791</b>	<b>10,984</b>	<b>12,249</b>	<b>13,002</b>	<b>15,636</b>



**Divorced persons at each census, 1921 to 1971**

The following table shows the number and proportion of divorced persons in Australia as recorded from returns supplied at each census from 1921 to 1971. A classification of divorced persons by ages for the censuses from 1891 to 1947 appeared in earlier issues of the Year Book (*see* No. 39, page 269). The number of divorced persons at the 1911 Census is shown in Year Book No. 58, page 453. Before 1911 no record was made of divorced persons in South Australia, so comparisons cannot be made beyond that date.

**DIVORCED PERSONS AT CENSUS DATES: AUSTRALIA, 1921 TO 1971**

Sex	Number							Number per 10,000 of males or females 15 years of age and over						
	1921	1933	1947	1954	1961	1966	1971	1921	1933	1947	1954	1961	1966	1971
Males .	4,233	10,298	25,052	32,389	38,640	42,908	61,479	23	42	89	100	105	105	136
Females .	4,304	10,888	27,516	36,650	43,339	51,174	71,421	24	46	96	115	119	125	157

**Bankruptcy**

For a description of the provisions of the *Bankruptcy Act* 1966-1969, *see* Year Book No. 55, pages 586-7. The Bankruptcy Act was amended in 1970 to remove any obstacle the Act may present to the operation of compositions or schemes of arrangement entered into under State or Territory legislation providing assistance to farmers in respect of their debts.

**Bankruptcy proceedings**

The following table shows the number of bankruptcies of the various types in each State, together with the disclosed assets and liabilities of the debtors, during 1971-72.

**BANKRUPTCY PROCEEDINGS: STATES AND TERRITORIES, 1971-72**

State or Territory		Sequestration orders and orders for administration of deceased debtors' estates	Compositions	Deeds of assignment	Deeds of arrangement	Total
N.S.W.(a)	Number	612	19	43	10	684
	Liabilities \$	4,373,609	144,513	1,260,676	313,794	6,092,592
	Assets \$	1,327,560	104,773	744,899	590,855	2,768,087
Vic.	Number	602	17	46	39	704
	Liabilities \$	10,691,209	164,288	2,437,282	1,241,890	14,534,669
	Assets \$	3,201,402	77,904	1,049,370	646,035	4,974,711
Qld	Number	277	7	17	11	312
	Liabilities \$	6,237,702	46,835	367,341	340,337	6,992,215
	Assets \$	2,012,805	23,080	330,693	203,265	2,569,843
S. Aust..	Number	622	1	10	10	643
	Liabilities \$	3,695,896	95,404	449,325	393,887	4,634,512
	Assets \$	1,884,312	13,575	398,397	316,783	2,613,067
W. Aust.	Number	408	20	30	60	518
	Liabilities \$	3,478,336	584,852	1,736,405	1,484,925	7,284,518
	Assets \$	1,300,244	465,143	811,740	1,562,544	4,139,671
Tas.	Number	156	..	7	5	168
	Liabilities \$	1,090,997	..	47,269	167,936	1,306,202
	Assets \$	438,277	..	41,864	220,458	700,599
N.T.	Number	7	..	..	..	7
	Liabilities \$	101,344	..	..	..	101,344
	Assets \$	78,888	..	..	..	78,888
Australia	Number	2,684	64	153	135	3,036
	Liabilities \$	29,669,093	1,035,892	6,298,298	3,942,769	40,946,052
	Assets \$	10,243,488	684,475	3,376,963	3,539,940	17,844,866

(a) Includes the Australian Capital Territory.

The next table shows Australian figures in respect of each of the various types of bankruptcy, for the years 1967-68 to 1971-72.

## BANKRUPTCY PROCEEDINGS: AUSTRALIA, 1967-68 TO 1971-72

Year		<i>Sequestration orders and orders for administration of deceased debtors' estates</i>	<i>Compositions</i>	<i>Deeds of assignment</i>	<i>Deeds of arrangement</i>	<i>Total</i>
1967-68	Number . . .	2,350	78	35	88	2,551
	Liabilities \$'000	15,222	1,828	1,229	3,330	21,609
	Assets \$'000	6,292	1,189	918	2,010	10,409
1968-69	Number . . .	2,302	52	103	93	2,550
	Liabilities \$'000	15,865	893	3,870	2,641	23,269
	Assets \$'000	7,588	447	2,699	1,674	12,408
1969-70	Number . . .	2,236	59	145	102	2,542
	Liabilities \$'000	18,243	1,006	3,810	2,903	25,962
	Assets \$'000	6,820	423	2,881	2,297	12,422
1970-71	Number . . .	2,428	64	152	139	2,783
	Liabilities \$'000	21,259	849	3,976	4,681	30,765
	Assets \$'000	8,868	286	2,947	5,199	17,300
1971-72	Number . . .	2,684	64	153	135	3,036
	Liabilities \$'000	29,669	1,036	6,298	3,943	40,946
	Assets \$'000	10,243	684	3,377	3,540	17,844

## The High Court of Australia

The High Court of Australia consists of a Chief Justice and six other Justices. Its principal seat is in Melbourne, but sittings are held in every State capital as occasion requires. The High Court has both original and appellate jurisdiction. Its original jurisdiction is usually exercised by a single Justice, appellate jurisdiction by at least three Justices. The following table sets out transactions in its original and appellate jurisdiction for 1971 and 1972.

## TRANSACTIONS OF THE HIGH COURT OF AUSTRALIA, 1971 AND 1972

<i>Original jurisdiction(a)</i>	<i>1971</i>	<i>1972</i>	<i>Appellate jurisdiction</i>	<i>1971</i>	<i>1972</i>
Number of writs issued . . .	90	54	Number of appeals—		
Number of causes entered for trial . . .	27	26	Set down for hearing . . .	111	107
Judgments for plaintiffs . . .	5	8	Allowed . . .	47	49
Judgments for defendants . . .	3	2	Dismissed . . .	90	65
Otherwise disposed of . . .	14	10	Otherwise disposed of . . .	18	16
Amounts of judgments . . .	\$34,464	\$566,391			

(a) Some matters dealt with by the High Court neither originate as writs nor are entered as causes.

During 1971 and 1972, respectively, the High Court dealt also with the following: appeals from assessments under the Taxation Assessments Act, 53, 81; special cases stated for the opinion of the Full Court, 3, 4; applications for prohibition, etc., 10, 12. The fees collected amounted to \$15,992 in 1971 and \$15,046 in 1972.

## Selected crime reported to police

The following tables show some details of certain categories of offences reported or becoming known to police. This series, which commenced in 1964, is derived from police records and is based, as far as possible, on definitions and procedural arrangements uniformly determined for all States. The following explanations are necessary in order to interpret the figures in this series.

*Offences reported or becoming known.* All incidents reported or becoming known to the police which are found to constitute offences within the scope of the crimes covered are included. Offences are shown as 'reported or becoming known' in the period during which it has been established that the incident constitutes a crime, not necessarily in the period when the incident occurred. However, the incident is included when the police are satisfied that a crime has been committed, even though it may be established in subsequent proceedings that no crime or a crime of a different nature was committed. As far as possible, the offences are recorded in respect of the State in which the incident occurred, regardless of which police force undertakes investigations or prosecutions, or where an arrest is made. In the case of homicide, assault, robbery, and rape, one offence is counted in respect of each victim, regardless of the number of offenders involved. In the case of breaking and entering, and fraud, etc., one offence is counted for each act or series of directly related acts occurring at the same time and place, and under the same circumstances. Each motor vehicle stolen is counted as constituting a separate offence.

*Offences cleared.* An offence of the type included in this series is counted as 'cleared' when an information (charge, arrest or summons to appear) has been laid against at least one person involved. However, an offence may also be counted as 'cleared' without an information being laid. This may occur when the offender has received an official caution or has died, has committed suicide, has been committed to a mental institution, or is in another jurisdiction from which extradition is not desired or available, or is serving a sentence; or if there are other obstacles to prosecution, such as diplomatic immunity or that the complainant refuses to prosecute. A clearance is always shown against the classification under which the offence was 'reported', regardless of the nature of the charge laid or changes in the description of an offence due to later information. The entries are made in respect of the year when the offence was 'cleared', whether or not the offence was 'reported' in that or an earlier year.

*Persons involved in crimes cleared.* This is the sum of the number of persons dealt with in each of the offences shown as 'cleared'. If more than one person is involved in the one offence, each person is counted. If the same person is involved in more than one offence cleared, he is counted separately for each offence. Persons involved are shown against the categories of offences to which an incident was originally allocated, regardless of the actual offences they are charged with. This basis of counting 'persons involved in offences cleared' was adopted to reveal trends in crime participation by persons in various age-groups. The figures in this series are not directly comparable with statistics of persons charged or convicted in court, or of cases brought before the courts; nor do these figures reveal the number of offenders in the community.

#### Offences included in the statistics

*Homicide.* Separate details are provided for murder, attempted murder (i.e. acts done with intent to murder) and manslaughter (unlawful killing other than murder), excluding manslaughter arising from motor traffic accidents.

*Serious assault.* These are assaults normally dealt with on indictment. Includes woundings, offences causing bodily harm, assaults with a weapon, etc., and attempts of this nature. Excludes sexual assault and robbery. *Uniform interpretation of this definition between States is especially difficult to effect.*

*Robbery.* Stealing anything, if at or immediately before or after the time of stealing, the offender uses or threatens to use violence to any person or property in order to obtain the thing stolen, or to prevent or overcome resistance to its being stolen. Includes attempts of this nature.

*Rape.* Includes attempted rape and assault with intent to rape. Excludes unlawful carnal knowledge (i.e. where consent is given, but the girl is below the legal age of consent) and indecent assault.

*Breaking and entering.* Breaking and entering a building (or entering a building and breaking out) and committing or intending to commit a crime. Includes burglaries. Separate details are shown according to the type of building involved, namely, *dwellings* (including unoccupied dwellings, tents, caravans, etc., used as dwellings, and the residential parts of hotels, schools, etc.); *shops* (including kiosks, service stations, restaurants, bars, non-residential clubs, etc.); and *offices, factories and warehouses* (including parts of buildings, but excluding dwellings and shops used for such purposes). Includes attempts. From 1967 the figures exclude breakings involving property valued at \$100 or less.

*Motor vehicle thefts, illegal use, etc.* Includes all offences of illegal, unlawful or unauthorised use, use without consent, unlawfully assuming control, etc., no matter under which legislation these offences are prescribed. Excludes cases of 'interference', but includes attempts at illegal use. The number of stolen motor vehicles which are recovered is also shown.



*Fraud, forgery, false pretences.* Includes embezzlement, 'omit to account', misappropriation, fraudulent appropriation, conversion, larceny as bailee, falsification of accounts, company fraud, forgery, uttering, false pretences, passing of valueless cheques and offences by trustees. Includes attempts, but excludes imposition. As a general rule, offences are included only if there is an element of deception or trickery. Separate details are shown for *valueless cheque* offences (i.e. passing of valueless cheques, whether there is no account, insufficient funds or a false signature of the purported drawer of the cheque. However, this sub-group excludes cases where a genuine cheque is altered or the endorsement of the payee is forged. These cases are regarded as forgery and or uttering and included in 'other').

### Offences reported or becoming known to police

The following table shows, for each State and Territory, the number of offences in each of the seven categories covered by this series which were reported or became known to police during the years 1968 to 1972. The table includes offences reported to and investigated by the Commonwealth Police for the years 1970-1972.

SELECTED CRIME REPORTED OR BECOMING KNOWN TO POLICE  
NUMBER OF OFFENCES, STATES AND TERRITORIES, 1968 TO 1972

Category of crime	N.S.W.(a)	Vic	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Homicide—</b>									
1968 . . . . .	140	52	51	18	14	10	12	3	300
1969 . . . . .	120	66	38	21	12	15	7	1	280
1970 . . . . .	125	107	36	34	15	10	9	3	339
1971 . . . . .	134	87	44	27	26	8	15	2	343
1972 . . . . .	134	132	66	28	32	16	10	4	422
<b>Serious assault(b)—</b>									
1968 . . . . .	611	1,600	128	52	60	19	15	23	2,508
1969 . . . . .	626	1,460	134	92	77	47	30	17	2,483
1970 . . . . .	799	2,014	177	87	95	32	46	32	3,282
1971 . . . . .	724	2,457	212	115	156	32	120	46	3,862
1972 . . . . .	834	2,801	251	149	97	20	95	38	4,285
<b>Robbery—</b>									
1968 . . . . .	544	480	88	79	48	23	6	12	1,280
1969 . . . . .	777	503	106	127	41	23	13	9	1,599
1970 . . . . .	867	744	124	140	69	33	11	11	1,999
1971 . . . . .	1,490	792	205	151	92	39	36	13	2,818
1972 . . . . .	1,484	941	259	162	97	52	27	23	3,045
<b>Rape—</b>									
1968 . . . . .	95	168	34	43	5	7	7	4	363
1969 . . . . .	126	144	35	32	6	7	7	7	364
1970 . . . . .	136	160	42	21	6	17	29	5	416
1971 . . . . .	204	191	74	44	21	23	17	4	578
1972 . . . . .	172	180	59	57	42	21	8	5	544
<b>Breaking and entering (dwellings, shops, offices, etc.)(c)—</b>									
1968 . . . . .	11,026	8,069	1,841	1,181	883	422	54	86	23,562
1969 . . . . .	11,923	8,215	2,035	1,299	1,368	586	66	105	25,597
1970 . . . . .	13,879	9,870	2,538	1,727	1,825	492	68	192	30,591
1971(d) . . . . .	13,394	12,189	3,798	1,878	1,623	666	171	206	33,925
1972(d) . . . . .	13,904	13,284	4,332	2,460	1,960	637	174	225	36,976
<b>Motor vehicle theft, etc.—</b>									
1968 . . . . .	13,008	9,352	1,740	1,967	2,084	759	192	196	29,298
1969 . . . . .	16,082	9,343	2,295	1,741	1,895	658	228	250	32,492
1970 . . . . .	18,464	11,246	3,023	2,140	2,700	722	347	284	38,926
1971 . . . . .	20,756	12,688	4,090	2,746	3,645	1,012	482	376	45,795
1972 . . . . .	19,895	11,710	4,725	3,073	4,469	1,234	459	359	45,924
<b>Fraud, forgery, etc.—</b>									
1968 . . . . .	6,283	4,402	4,154	1,596	1,476	607	271	166	18,955
1969 . . . . .	5,897	4,554	4,056	2,927	1,924	660	187	210	20,415
1970 . . . . .	10,657	9,233	4,239	3,797	2,609	800	208	296	31,839
1971 . . . . .	12,769	8,065	5,207	3,788	2,383	783	265	297	33,557
1972 . . . . .	12,134	8,474	6,221	3,560	2,558	1,060	283	283	34,573

(a) Figures for 1971 and 1972 are not necessarily comparable with those for earlier years because of changes in reporting procedures. (b) See definition on page 463. (c) Excludes offences involving property valued at \$100 or less. (d) Excludes 8,175 attempted breaking and entering offences in New South Wales in 1971, and 8,282 in 1972.

### Crimes cleared and persons involved

The tables which follow show, for the various categories of offences, the numbers of offences reported, the numbers cleared, and the numbers of persons involved according to age and sex. Sub-divisions of the categories homicide, breaking and entering, and fraud, etc., are provided. See pages 462-4 for definitions used and the bases on which these statistics are prepared.

**HOMICIDE: CRIMES REPORTED OR BECOMING KNOWN, CRIMES CLEARED  
AND PERSONS INVOLVED, AUSTRALIA, 1970 TO 1972**

	<i>Murder</i>			<i>Attempted murder</i>			<i>Manslaughter</i>			<i>All homicide</i>		
	1970	1971	1972	1970	1971	1972	1970	1971	1972	1970	1971	1972
Numbers reported or becoming known .	172	185	207	145	119	169	22	39	46	339	343	422
Numbers cleared .	160	178	195	139	112	147	22	39	42	321	329	384
Persons involved in crimes cleared—												
Aged(a)—												
16 years and under	15	9	7	7	3	7	1	1	4	23	13	18
17 and 18 years .	8	11	13	11	8	8	4	2	4	23	21	25
19 and 20 years .	14	9	13	17	11	27	1	5	4	32	25	44
21 years and over .	147	171	187	116	99	139	16	35	34	279	305	360
Total persons involved .	184	200	220	151	121	181	22	43	46	(b)357	(b)364	(b)447

(a) Age last birthday at time of clearance. (b) Includes 51 females in 1970, 43 in 1971, and 43 in 1972.

**SERIOUS ASSAULT, ROBBERY, RAPE: CRIMES REPORTED OR BECOMING KNOWN  
CRIMES CLEARED, AND PERSONS INVOLVED, AUSTRALIA, 1970 TO 1972**

	<i>Serious assault</i>			<i>Robbery</i>			<i>Rape</i>		
	1970	1971	1972	1970	1971	1972	1970	1971	1972
Numbers reported or becoming known	3,282	3,862	4,285	1,999	2,818	3,045	416	578	544
Numbers cleared	2,524	2,936	3,200	755	827	802	315	375	380
Persons involved in crimes cleared—									
Aged(a)—									
16 years and under . . . .	268	363	405	200	251	285	40	39	48
17 and 18 years . . . . .	406	627	502	285	283	315	58	111	88
19 and 20 years . . . . .	449	511	433	238	217	245	73	100	81
21 years and over . . . . .	1,884	2,168	2,388	566	669	647	223	239	269
Total persons involved . . . .	(b)3,007	(b)3,669	(b)3,728	(c)1,289	(c)1,420	(c)1,492	394	(d)489	486

(a) Age last birthday at time of clearance. (b) Includes 119 females in 1970, 169 in 1971 and 175 in 1972.  
(c) Includes 44 females in 1970, 50 in 1971, and 53 in 1972. (d) Includes 1 female in 1971.

**BREAKING AND ENTERING(a): CRIMES REPORTED OR BECOMING KNOWN, CRIMES  
CLEARED, AND PERSONS INVOLVED, AUSTRALIA, 1970 TO 1972**

	<i>Dwellings</i>			<i>Shops</i>			<i>Offices and warehouses</i>			<i>Total</i>		
	1970	1971	1972	1970	1971	1972	1970	1971	1972	1970	1971	1972
Numbers reported or becoming known .	15,110	17,707	19,632	7,552	9,243	9,300	7,929	6,975	8,044	30,591(b)	33,925(b)	36,976
Numbers cleared .	2,306	2,119	2,327	1,885	1,854	2,104	1,253	836	1,072	5,444	4,809	5,503
Persons involved in crimes cleared—												
Ages(c)—												
16 years and under	1,122	1,072	1,413	694	902	1,109	407	409	624	2,223	2,383	3,146
17 and 18 years .	600	682	526	590	634	720	331	251	320	1,521	1,567	1,566
19 and 20 years .	387	415	384	421	512	501	221	178	233	1,029	1,105	1,118
21 years and over .	1,180	1,112	1,357	1,175	1,182	1,466	890	588	802	3,245	2,882	3,625
Total persons involved .	3,289	3,281	3,680	2,880	3,230	3,796	1,849	1,426	1,979	(d)8,018	(d)7,937	(d)9,455

(a) Excludes offences involving property valued at \$100 or less. (b) Excludes 8,175 attempted breaking and entering offences in New South Wales in 1971, and 8,282 in 1972. (c) Age last birthday at time of clearance. (d) Includes 134 females in 1970, 274 in 1971, and 293 in 1972.

**MOTOR VEHICLE THEFT, ETC., FRAUD, ETC.: CRIMES REPORTED OR BECOMING KNOWN, CRIMES CLEARED, AND PERSONS INVOLVED, AUSTRALIA, 1970 TO 1972**

	<i>Motor vehicle theft, etc.</i>			<i>Fraud, forgery, false pretences</i>								
	1970	1971	1972	<i>Valueless cheques</i>			<i>Other</i>			<i>All fraud, etc.</i>		
				1970	1971	1972	1970	1971	1972	1970	1971	1972
Numbers reported or becoming known .	38,926	45,795	42,924	10,524	11,813	12,404	21,315	21,744	22,169	31,839	33,557	34,573
Numbers cleared .	7,820	10,395	11,341	6,839	7,186	7,379	14,754	14,643	14,742	21,593	21,829	22,121
Persons involved in crimes cleared—												
Males aged(a)—												
16 years and under .	5,662	7,754	8,772	189	178	148	547	368	514	736	546	662
17 and 18 years .	3,331	4,168	4,152	244	303	307	343	673	544	587	976	851
19 and 20 years .	1,300	1,692	1,846	343	453	568	575	781	619	918	1,234	1,187
21 years and over .	2,035	2,907	3,053	5,120	5,455	5,690	9,013	9,784	8,827	14,133	15,239	14,517
Total males .	12,328	16,521	17,823	5,896	6,389	6,713	10,478	11,606	10,504	16,374	17,995	17,217
Females aged(a)—												
16 years and under .	118	269	250	35	55	44	135	128	395	170	183	439
17 and 18 years .	42	71	88	104	54	48	356	320	584	460	374	632
19 and 20 years .	39	49	30	86	108	53	273	314	457	359	422	510
21 years and over .	34	52	74	1,250	950	973	3,859	2,914	3,342	5,109	3,864	4,315
Total females .	233	441	442	1,475	1,167	1,118	4,623	3,676	4,778	6,098	4,843	5,896
Total persons involved .	12,561	16,962	18,265	7,371	7,556	7,831	15,101	15,282	15,282	22,472	22,838	23,113

(a) Age last birthday at time of clearance.

The number of stolen motor vehicles recovered was: 1970, 34,864; 1971, 41,332; 1972, 42,956.

### Drug offences

Australia is a signatory to the Single Convention of Narcotic Drugs which has as its main aim the limitation of narcotic drugs to legitimate medical and research purposes.

As its name implies, the Single Convention covers only the so-called narcotic drugs. In recognition that there are other drugs of dependence, the member nations met during 1970 and 1971 and drew up a further Convention to impose controls on psychotropic substances such as hallucinogens, amphetamines, other central nervous system stimulants, barbiturates, tranquillisers and certain other sedatives.

#### Legislative provisions

Regulation 5 of the Customs (Prohibited Imports) Regulations made under Section 50 of the *Customs Act 1901-1971* provides the legal controls for the importation of narcotic drugs and other drugs of dependence. Under this regulation all importers of these drugs must be licensed and must obtain permission in writing for each importation. Importers are also required to keep these drugs in a secure place and to keep such records as may be required concerning use or disposal.



The penalty on conviction for an offence relating to narcotic goods as defined in the *Customs Act 1901-1971* is:

(a) In a Court of Summary Jurisdiction—

A fine not exceeding \$2,000 or imprisonment for a period not exceeding 2 years, or both.

(b) On indictment—

A fine not exceeding \$4,000 or imprisonment for a period not exceeding 10 years, or both.

The manufacture of narcotic drugs in Australia is controlled under the *Narcotic Drugs Act 1967*. The Act requires that a manufacturer shall be licensed and shall comply with strict conditions and directions relating to such manufacture and the handling of the drugs concerned. Failure to comply with these requirements constitutes an offence against the Act and the penalty upon conviction for such an offence is:

(a) In a Court of Summary Jurisdiction—

A fine not exceeding \$1,000 or imprisonment for a period not exceeding 2 years, or both.

(b) On indictment—

A fine not exceeding \$4,000 or imprisonment for a period not exceeding 10 years, or both.

State and Territory legislation relating to the regulation, control and prohibition of the sale, use, possession and administering (including smoking) of poisons, restricted substances, drugs of addiction, dangerous drugs and deleterious substances, is listed below.

New South Wales	. . .	Poisons Act, 1966-1967; Summary Offences Act, 1970
Victoria	. . .	<i>Poisons Act 1962</i>
Queensland	. . .	<i>'The Health Acts 1937 to 1967'</i>
South Australia	. . .	Narcotic and Psychotropic Drugs Act, 1970 (formerly Dangerous Drugs Act, 1934-1955); Food and Health Act, 1908-1962; Police Offences Act, 1953-1961
Western Australia	. . .	<i>Police Act, 1892-1967; Poisons Act 1964</i>
Tasmania	. . .	<i>Dangerous Drugs Act 1959; Alcohol and Drug Dependency Act 1968; Health Services Act 1960</i>
Northern Territory	. . .	<i>Dangerous Drugs Ordinance 1928-1973; Poison Ordinance 1924-1970.</i>
Australian Capital Territory	. . .	<i>Poisons and Dangerous Drugs Ordinance 1967</i>

In some States this legislation also provides for the offence of 'trafficking' (where there is possession of a minimum specified quantity of a prescribed substance, prohibited drug, or drug of addiction, such possession being *prima facie* for the offence), and for the offence of being the owner, lessee, or concerned in the management of any premises used for the purposes of drug abuse such as the smoking of opium or indian hemp. Offences of habitually consorting, etc., with reputed drug offenders are also covered under State legislation.

During 1971 some States introduced legislation requiring that stocks of dangerous drugs in pharmacies be stored in heavy metal safes.

All State Governments have agreed to a uniform code of penalties based on those applicable in Commonwealth legislation. Some State Governments have already taken the legislative action to implement this decision.

## Law enforcement

Law enforcement in respect of drugs is handled by State police forces, the Commonwealth Police Force, and the Department of Customs and Excise. In 1969 a National Standing Control Committee on Drugs of Dependence was established to consider further action by the Commonwealth and States to combat all aspects of the drug problem in Australia and to make recommendations on legislative and administrative action. The Committee is chaired by the Comptroller-General of Customs and its members comprise senior officers of Commonwealth and State police and health authorities.

The National Standing Control Committee on Drugs of Dependence recommended that the Central Crime Intelligence Bureau of the Commonwealth Police serve as the national agency for the systematic collection, evaluation and dissemination of information concerning the illicit drug traffic in Australia. During 1972, the third complete year for which the Central Crime Intelligence Bureau compiled statistics, 4,960 drug offences, for which 2,412 males and 413 females were prosecuted, were reported to the Bureau. Details of the offences and the drugs involved are given in the following table.

**PROSECUTIONS AND CONVICTIONS FOR DRUG OFFENCES REPORTED TO THE CENTRAL CRIME INTELLIGENCE BUREAU: PERSONS INVOLVED, AUSTRALIA 1972.**

(Source: Commonwealth Police)

Offence	Number of offenders	Number of individual charges	Convictions on individual charges	Fines imposed		Gaol sentences		Number of bonds granted(a)	Number of charges not proceeded with or dismissed	Number of charges pending
				Number	Amount	Number	Months			
<b>Unlawful possession—</b>					\$					
Males aged—										
16 years and under	60	71	35	7	1,320	1	6	26	1	24
17 and 18 years .	276	324	223	118	24,415	19	127	80	9	82
19 and 20 years .	380	431	301	192	46,390	29	227	97	26	86
21 years and over .	852	1,013	680	482	119,930	66	857	103	58	251
Total males .	1,568	1,839	1,239	799	192,055	115	1,217	306	94	443
Females aged—										
16 years and under	20	22	12	..	3,550	..	..	12	2	8
17 and 18 years .	47	48	32	14	3,550	1	2	18	2	11
19 and 20 years .	47	48	26	19	3,905	1	6	10	2	19
21 years and over .	86	101	63	35	8,870	6	48	19	8	26
Total females .	200	219	133	68	16,325	8	56	59	14	64
<b>Unlawful import—</b>										
Males aged—										
16 years and under	3	3	3	1	250	..	..	2	..	..
17 and 18 years .	11	11	6	2	250	1	4	3	..	5
19 and 20 years .	27	35	23	7	1,965	8	234	5	1	11
21 years and over .	109	130	86	38	13,440	31	973	5	5	39
Total males .	150	179	118	48	15,905	40	1,211	15	6	55
Females aged—										
16 years and under	..	..	..	..	..	..	..	..	..	..
17 and 18 years .	..	..	..	..	..	..	..	..	..	..
19 and 20 years .	1	1	1	..	..	..	..	1	..	..
21 years and over .	13	16	12	8	2,750	1	18	1	1	3
Total females .	14	17	13	8	2,750	1	18	2	1	3
<b>Unlawful use—</b>										
Males aged—										
16 years and under	60	71	40	8	630	1	24	27	3	23
17 and 18 years .	229	278	187	86	16,385	4	38	94	9	66
19 and 20 years .	303	346	244	155	27,875	18	149	75	17	73
21 years and over .	446	504	362	242	48,290	34	343	86	23	119
Total Males .	1,038	1,199	833	491	93,180	57	554	282	52	281
Females aged—										
16 years and under	43	52	25	..	2,450	..	..	30	12	12
17 and 18 years .	63	81	50	14	2,450	3	28	28	6	15
19 and 20 years .	50	55	33	14	1,950	3	24	19	1	19
21 years and over .	53	60	40	16	2,300	3	23	18	5	15
Total females .	209	248	148	44	6,700	9	75	95	24	61
<b>Theft—</b>										
Males aged—										
16 years and under	4	14	6	..	125	..	..	2	..	8
17 and 18 years .	15	25	14	3	125	3	39	4	..	11
19 and 20 years .	29	43	29	1	50	9	165	7	1	13
21 years and over .	43	85	45	2	160	21	374	10	2	37
Total males .	91	167	94	6	335	33	578	23	3	69
Females aged—										
16 years and under	2	2	1	..	..	..	..	1	1	..
17 and 18 years .	1	2	2	..	..	..	..	1	..	..
19 and 20 years .	2	2	1	..	..	..	..	1	1	..
21 years and over .	10	14	11	3	360	1	4	2	..	3
Total females .	15	20	15	3	360	1	4	5	2	3

For footnote; see next page.

PROSECUTIONS AND CONVICTIONS FOR DRUG OFFENCES REPORTED TO THE CENTRAL CRIME INTELLIGENCE BUREAU: PERSONS INVOLVED, AUSTRALIA 1972—continued

Offence	Number of offenders	Number of individual charges	Convictions on individual charges	Fines imposed		Gaol sentences		Number of bonds granted(a)	Number of charges not proceeded with or dismissed	Number of charges pending
				Number	Amount	Number	Months			
<b>Trafficking</b>					\$					
<b>Males aged—</b>										
16 years and under	13	14	3	..	..	1	6	2	3	8
17 and 18 years	31	38	27	7	1,500	5	47	15	3	8
19 and 20 years	68	84	53	16	4,610	9	200	13	3	26
21 years and over	141	195	107	24	6,470	50	666	22	12	74
<i>Total males</i>	<i>253</i>	<i>331</i>	<i>190</i>	<i>47</i>	<i>12,580</i>	<i>65</i>	<i>919</i>	<i>52</i>	<i>21</i>	<i>116</i>
<b>Females aged—</b>										
16 years and under	5	5	4	..	..	..	..	4	1	..
17 and 18 years	13	13	8	3	753	1	2	6	1	4
19 and 20 years	6	7	4	2	250	2	15	1	1	2
21 years and over	9	9	5	2	350	2	27	1	..	4
<i>Total females</i>	<i>33</i>	<i>34</i>	<i>21</i>	<i>7</i>	<i>1,353</i>	<i>5</i>	<i>44</i>	<i>12</i>	<i>3</i>	<i>10</i>
<b>Other offences—</b>										
<b>Males aged—</b>										
16 years and under	8	8	2	1	50	..	..	1	2	4
17 and 18 years	54	210	120	26	5,840	5	31	7	2	18
19 and 20 years	82	92	59	40	7,540	25	47	11	3	25
21 years and over	189	256	165	91	22,385	24	459	30	24	64
<i>Total males</i>	<i>333</i>	<i>566</i>	<i>346</i>	<i>158</i>	<i>35,815</i>	<i>34</i>	<i>537</i>	<i>49</i>	<i>31</i>	<i>111</i>
<b>Females aged—</b>										
16 years and under	5	5	3	..	..	..	..	3	1	1
17 and 18 years	11	21	12	5	655	..	..	5	1	8
19 and 20 years	9	11	8	1	200	1	6	3	..	3
21 years and over	22	43	34	6	780	2	33	8	1	8
<i>Total females</i>	<i>47</i>	<i>80</i>	<i>57</i>	<i>12</i>	<i>1,635</i>	<i>3</i>	<i>39</i>	<i>19</i>	<i>3</i>	<i>20</i>
<b>Total males</b>	<b>3,433</b>	<b>4,281</b>	<b>2,820</b>	<b>1,549</b>	<b>349,870</b>	<b>344</b>	<b>5,016</b>	<b>727</b>	<b>207</b>	<b>1,075</b>
<b>Total females</b>	<b>518</b>	<b>618</b>	<b>387</b>	<b>142</b>	<b>29,123</b>	<b>27</b>	<b>236</b>	<b>192</b>	<b>47</b>	<b>161</b>

(a) Bonds include suspended gaol sentences and/or other recognisance to be of good behaviour for a specific time.



## NUMBER OF CHARGES(a) INVOLVING SPECIFIC DRUG TYPES

(Source: Commonwealth Police)

Type of drug	Possess	Import	Use/ administer	Traffic	Steal	False pretences	Forge prescription	Other	Total(b)
<b>Narcotics—</b>									
Cocaine . . . . .	27	1	26	1	12	..	..	2	69
Codaine . . . . .	6	..	5	..	9	..	..	..	20
Palfium . . . . .	15	..	17	3	5	3	77	4	124
Physeptone . . . . .	17	..	17	..	2	32	105	3	176
Morphine . . . . .	100	4	103	20	58	1	1	23	310
Opium . . . . .	30	8	11	..	4	..	..	4	57
Opium preparations . . . . .	8	..	1	1	1	..	..	..	11
Pethedine . . . . .	32	..	35	5	38	14	22	7	153
Omnopon . . . . .	6	..	6	..	3	1	2	..	18
Heroin . . . . .	45	18	67	18	..	..	..	1	149
Other narcotic . . . . .	1	..	1	..	1	..	2	..	5
<b>Total</b> . . . . .	<b>287</b>	<b>31</b>	<b>289</b>	<b>48</b>	<b>133</b>	<b>51</b>	<b>209</b>	<b>44</b>	<b>1,092</b>
<b>Cannabis—</b>									
Plants . . . . .	150	..	..	3	..	..	..	71	224
Seeds . . . . .	143	9	..	4	..	..	..	5	161
Marihuana . . . . .	1,377	134	994	210	..	..	..	124	2,839
Hashish . . . . .	116	62	46	18	..	..	..	6	248
Cannabiol . . . . .	1	..	..	..	..	..	..	..	1
<b>Total</b> . . . . .	<b>1,787</b>	<b>205</b>	<b>1,040</b>	<b>235</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>206</b>	<b>3,473</b>
<b>Amphetamines—</b>									
Amphetamine . . . . .	2	..	1	..	..	..	..	1	4
Dexamphetamine . . . . .	12	..	3	..	..	..	..	..	15
Drinamyl . . . . .	3	..	..	..	..	..	..	..	3
Methyl-amphetamine . . . . .	23	..	14	..	9	..	..	..	46
Methyl-phenidate . . . . .	6	..	1	..	3	9	2	..	21
Other unspecified amphetamine . . . . .	8	..	5	1	..	..	..	1	15
<b>Total</b> . . . . .	<b>54</b>	<b>..</b>	<b>24</b>	<b>1</b>	<b>12</b>	<b>9</b>	<b>2</b>	<b>2</b>	<b>104</b>
<b>Barbiturates/hypnotics—</b>									
Amylobarbitone . . . . .	9	..	1	1	..	..	..	1	12
Pentobarbitone . . . . .	8	..	4	2	..	..	22	1	37
Quinalbarbitone . . . . .	3	..	..	..	..	..	..	..	3
Other barbiturates . . . . .	10	..	22	6	..	..	6	..	44
Methaqualone . . . . .	5	..	2	..	1	..	..	3	11
<b>Total</b> . . . . .	<b>35</b>	<b>..</b>	<b>29</b>	<b>9</b>	<b>1</b>	<b>..</b>	<b>28</b>	<b>5</b>	<b>107</b>
<b>Tranquillisers—</b>									
Valium . . . . .	11	5	2	1	1	1	8	4	33
<b>Total</b> . . . . .	<b>11</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>4</b>	<b>33</b>
<b>Hallucinogens—</b>									
L.S.D. . . . .	128	12	195	65	..	2	..	3	405
Psilocybine . . . . .	62	..	10	2	..	..	..	..	74
Mescaline . . . . .	7	3	1	1	..	..	..	..	12
Other hallucinogens . . . . .	4	..	3	..	..	..	..	..	7
<b>Total</b> . . . . .	<b>201</b>	<b>15</b>	<b>209</b>	<b>68</b>	<b>..</b>	<b>2</b>	<b>..</b>	<b>3</b>	<b>498</b>
<b>Grand Total</b> . . . . .	<b>2,375</b>	<b>256</b>	<b>1,593</b>	<b>362</b>	<b>147</b>	<b>63</b>	<b>247</b>	<b>264</b>	<b>5,307</b>

(a) If a number of different drug types have been involved in an offence, they are counted under each drug category. (b) As a percentage of all charges, cannabis comprises 65.45 per cent; narcotics, 20.58 per cent; hallucinogens, 9.39 per cent; barbiturates/hypnotics, 2.02 per cent; amphetamines, 1.94 per cent; tranquillisers, 0.62 per cent.

In 1969 the Commonwealth Bureau of Narcotics was created within the Department of Customs and Excise, as part of the Government's campaign to combat the increasing incidence of illicit trafficking of drugs in Australia. The Bureau operates on a national basis and is made up of three sections:

**Licit Control Section**—responsible for the control of legal importation and exportation of all drugs of dependence as well as controlling the manufacture of narcotic drugs in Australia. The section is also responsible for ensuring that Australia's obligations, as a signatory to the various international conventions on drugs, are complied with.

**Overseas Liaison**—responsible for maintaining an effective system for the exchange of information with overseas law enforcement agencies concerned with the suppression of illicit trafficking in drugs.

**Law Enforcement**—responsible for the prevention of, and investigations into, illegal importation, exportation, and major trafficking of drugs. Its activities are concentrated in co-ordinated operations against importers and major distributors.

The following table shows the types of drugs and amounts seized by the Department of Customs and Excise in the years 1968–72.

## DRUG SEIZURES BY THE DEPARTMENT OF CUSTOMS AND EXCISE: 1968 TO 1972

Type of drug	Unit	1968	1969	1970	1971	1972
Amphetamines(a)	gram	..	..	11,379	18	79
	tablet	..	688	..	1,421	493
Barbiturates(a)	gram	..	..	..	22	37
	tablet	..	..	2,800	287	1,050
Cannabis	gram	5,654	47,809	98,078	178,654	541,929
Cocaine	gram	..	..	..	4	198
	tablet	..	..	120	9	..
L.S.D.	dosage unit	..	368	17,611	21,676	69,863
Narcotics—						
Opium	gram	3,660	889	9,950	6,094	2,746
Heroin	gram	1,977	196	1,405	2,468	2,018
Morphine	gram	1,387	..	29	31	158
	ampoule	..	8	18	6	16
	tablet	..	..	151	2	..
Pethidine	tablet	..	..	43	6	43

(a) Not a prohibited import until 1969.

The number of offenders charged with drug offences by the Department of Customs and Excise, and the sentences imposed in the years 1968 to 1972 are given in the following table. Particulars of all drug offences in 1972 reported to the Central Crime Intelligence Bureau are shown in the table on page 470.

## PROSECUTIONS AND CONVICTIONS UNDER THE CUSTOMS ACT AND THE NARCOTIC DRUGS ACT FOR OFFENCES INVOLVING DRUGS OF DEPENDENCE 1968 TO 1972

(Source: Department of Customs and Excise)

Offence and year	Number of offenders	Number of individual charges	Convictions on individual charges	Fines imposed		Gaol sentences		Number of bonds granted (a)	Number of charges not proceeded with or dismissed	Number of charges pending
				Number	Amount	Number	Months			
Unlawful possession—					\$					
1968	51	52	46	41	8,820	4	22	1	3	3
1969	61	63	60	50	9,490	5	57	5	1	2
1970	79	82	68	50	18,415	19	220	4	5	9
1971	53	56	31	13	2,870	14	266	4	12	13
1972	85	89	63	46	13,275	14	220	2	9	18
Unlawful import—										
1968	21	25	15	13	1,615	2	42	..	3	7
1969	32	34	27	20	5,300	7	84	1	..	7
1970	55	62	58	36	15,285	16	238	9	..	4
1971	74	78	60	41	11,005	16	188	3	2	16
1972	105	116	86	46	13,207	34	694	5	6	23
Other offences—										
1968	1	1	1	1	500	..	..	..	..	..
1969	5	5	4	3	500	1	6	..	1	..
1970	12	13	12	11	700	..	..	..	1	..
1971	15	15	10	6	3,950	4	88	..	..	5
1972	48	56	25	15	3,675	6	102	5	16	14

(a) Bonds include suspended gaol sentences and/or other recognisances to be of good behaviour for a specified period.

NOTE. Where dual penalties such as a fine and a bond were imposed both are included.

## Senate Select Committee

On 25 November 1969, by resolution of the Senate, a Select Committee into Drug Trafficking and Drug Abuse was established. The report of the findings of the Senate Select Committee was tabled in May 1971.

## Police

The primary duties of the police are to prevent crime, to detect and detain offenders, to protect life and property, to enforce the law, and to maintain peace and good order. In addition, they perform many duties in the service of the State, e.g. they act as clerks of petty sessions in small centres, as crown land bailiffs, foresters, mining wardens, and inspectors under the fisheries and various other

Acts. In metropolitan and large country areas they also regulate the street traffic. With the exception of the Commonwealth Police Force and the police in the Northern Territory and the Australian Capital Territory, the police forces of Australia are under the control of the State Governments, but their members perform certain functions for the Commonwealth Government, such as acting as aliens registration officers and concurrently with Commonwealth Police and other Commonwealth Officers, policing various Commonwealth Acts and Regulations.

Women police perform special duties at places where young women and girls are subject to moral danger, control traffic at school crossings and lecture school children on road safety. They also assist male police as required in the performance of normal police duties.

The strength of the police force and the duties and ranks of the personnel involved in each State and Territory for 1972 are shown in the following table. Comparability between States is affected by differences in the classification of ranks and duties, and known differences between States are mentioned in footnotes.

Also included in the table are statistics of ancillary and civilian staff employed by police departments. Differences between States in the use of such staff are considerable. These differences arise, on the one hand, from differences in the extent to which police make use of such staff for police functions and, on the other hand, in the extent to which such staff are required to undertake additional functions (such as parking control) which are allocated to the police in varying degrees between States. There is also some overlap between duties of ancillary and civilian staff as defined in the footnotes to the table.

#### POLICE FORCES AND ASSISTANT STAFF: STATES AND TERRITORIES, 30 JUNE 1972

Duty and rank(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.
<b>POLICE FORCES</b>								
Criminal investigations, plain clothes police, scientific duties—								
Executive officers . . .	3	3	1	1	2	1	..	..
Inspectors . . .	14	23	9	3	3	5	..	..
Sergeants . . .	345	64	146	46	79	32	10	10
Constables(b) . . .	875	631	(c)295	259	159	78	30	32
Total, criminal investigations, etc. . .	1,237	721	(c)451	309	243	116	41	43
Traffic duties—								
Executive officers . . .	2	4	1	1	2	1	..	..
Inspectors . . .	7	9	4	4	7	2	..	..
Sergeants . . .	163	23	41	19	44	9	3	14
Constables(b) . . .	876	472	(c)223	211	202	86	14	78
Total, traffic duties . . .	1,048	508	(c)269	235	255	98	17	93
Other special and general duties—								
Executive officers . . .	24	29	6	10	12	5	..	..
Inspectors . . .	120	126	(d)71	40	20	35	3	10
Sergeants . . .	1,354	238	673	181	220	89	45	46
Constables(b) . . .	3,810	3,354	(c)1,563	1,253	894	397	167	197
Total, other special, etc. . .	5,308	3,747	(c)2,313	1,484	(e)1,146	526	(f)215	(f)253
Not allocated—								
Executive officers whose duties extend beyond one branch . . .	8	5	(g)5	2	4	..	3	2
Inspectors . . .	..	..	..	..	..	..	..	..
Police women . . .	106	144	65	40	38	21	5	7
Trainees and cadets . . .	207	149	250	375	..	118	..	..
Total, not allocated . . .	321	298	320	417	42	139	8	9
Total police force—								
Executive officers . . .	37	41	(g)13	14	20	7	3	2
Inspectors . . .	141	158	84	47	30	42	4	12
Sergeants . . .	1,862	325	860	246	343	130	58	70
Constables(b) . . .	5,561	4,457	(c)2,081	1,723	1,255	561	211	307
Police women . . .	106	144	65	40	38	21	5	7
Trainees and cadets . . .	207	149	250	375	..	118	..	..
Total police force . . .	7,914	5,274	3,353	2,445	1,686	879	281	398
<b>ANCILLARY AND CIVILIAN STAFF</b>								
Employed by Police Department—								
Ancillary staff(h)—								
Full-time . . .	210	136	23	(i)189	..	..	35	..
Part-time . . .	..	3	..	2	161	..	..	..
Civilian staff(j)—								
Full-time . . .	(k)1,264	849	473	96	(l)504	130	27	53
Part-time . . .	..	70	28	8	62	..	..	..

For footnotes see next page.



**POLICE FORCES AND ASSISTANT STAFF: STATES AND TERRITORIES, 30 JUNE 1972—**  
*continued*

<i>Duty and rank(a)</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>
<b>TOTAL STAFF</b>								
<b>Grand total—</b>								
Full-time . . . .	9,388	6,259	3,849	2,730	2,190	1,009	343	451
Part-time . . . .	..	73	28	10	223	..	..	..

(a) Where more than one duty is involved, officers have been allocated to the category of duties in which the greater part of their time is spent. The allocation of executive officers and inspectors to categories of duties is necessarily somewhat arbitrary and varies from State to State. (b) Includes probationary constables. (c) Excludes probationary constables; included with trainees and cadets. (d) Includes sub-inspectors. (e) Includes officers engaged on motor vehicle examination and testing and licensing drivers. (f) Does not include transport and maintenance; each section undertakes its own transport, and maintenance is done on contract and/or by the government transport pool. (g) Includes 1 chief superintendent. (h) Parking police, native trackers, wardresses, etc.; special constables in New South Wales and Tasmania; police reservists in Victoria. (i) Includes clerical workers in the Women Police Auxiliaries. (j) Clerks, typists, artisans, cleaners. (k) Does not include cleaning which is done by the Cleaning Services Branch of the Government Stores Department. (l) Includes 72 cadets whose appointment is not subject to the Police Act.

Ancillary and civilian staff are excluded from the following table.

**POLICE FORCES: STATES AND TERRITORIES, 1968 TO 1972**

<i>30 June—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1968 . . . .	7,111	4,825	3,083	2,214	1,421	632	172	228	19,686
1969 . . . .	7,259	4,743	3,179	2,255	1,490	670	195	288	20,079
1970 . . . .	7,324	4,739	3,221	2,282	1,529	701	235	290	20,321
1971 . . . .	7,470	4,945	3,197	2,360	1,616	796	259	347	20,990
1972 . . . .	7,914	5,274	3,353	2,445	1,686	879	281	398	22,230

**Commonwealth Police Force**

The Commonwealth Police Force commenced operations on 21 April 1960, and is the principal agency for the enforcement of the laws passed by the Commonwealth Parliament. It is also responsible for the protection of Commonwealth property and interests at various buildings and establishments under the control of the Commonwealth. This force co-ordinates the work of other Commonwealth investigation and law enforcement agencies and acts on behalf of the United Nations Organisation for the suppressing of traffic in women and the suppression of obscene literature.

Under the control of the force is the Australian Police College at Manly, New South Wales, which provides training for officers of various police forces and other agencies in Australia and New Zealand. The force has its Head Office in Canberra and District Offices in each capital city. The strength of the force at 30 June 1972 was 989 policemen and 4 policewomen. At that date there were, in addition, 117 civilian employees.

**Prisons**

**Prisons and prison accommodation**

**PRISONS AND PRISON ACCOMMODATION: STATES AND NORTHERN TERRITORY, 30 JUNE 1971**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
Prisons . . . .	22	13	8	16	13	1	2	75
Accommodation . . . .	3,717	2,666	1,321	1,414	1,611	417	239	11,385

There is no gaol in the Australian Capital Territory, but there are two lock-ups attached to police stations at Canberra and another lock-up at Jervis Bay where offenders are held for short periods. Prisoners remanded or sentenced by a court in the Australian Capital Territory for more than five days are usually held in New South Wales prisons.

## Convicted prisoners

## CONVICTED PRISONERS: STATES AND TERRITORIES, 1967 TO 1971

30 June—	N.S.W. (a)	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Australia	
								Number	Per 10,000 of popu- lation
1967 . .	3,334	1,994	1,021	866	1,137	275	112	8,739	7.4
1968 . .	3,292	2,103	958	926	1,150	281	120	8,830	7.3
1969 . .	3,327	2,199	1,065	884	1,214	331	177	9,197	7.5
1970 . .	3,429	2,178	1,104	836	1,174	327	198	9,246	7.4
1971 . .	3,493	2,276	1,142	854	1,261	352	166	9,544	7.5

(a) Includes Australian Capital Territory prisoners held in New South Wales prisons.

## Expenditure on law, order and public safety

## Expenditure on law, order and public safety

The following table shows the identifiable expenditure on goods and services of Commonwealth and State public authorities whose activities are primarily directed towards serving the purposes of law, order and public safety. Because of differing legislative and administrative arrangements and differing accounting practices in the various States, the activities covered by the figures are not the same in each State; and the activities covered by the Commonwealth figures differ from those of the States because of the Commonwealth's different responsibilities in this field. The Commonwealth and State figures are therefore not strictly comparable; but they have been compiled by uniform methods, and each series is comparable from year to year.

ALL PUBLIC AUTHORITIES: EXPENDITURE ON LAW, ORDER AND PUBLIC SAFETY  
1967-68 TO 1971-72

(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Net current expenditure on goods and services—					
Commonwealth Authorities . . .	12.5	13.9	16.5	20.1	25.2
State Authorities—					
New South Wales . . . . .	64.9	71.6	81.2	93.4	111.0
Victoria . . . . .	40.1	43.9	48.4	53.7	63.4
Queensland . . . . .	24.7	27.5	31.2	38.5	40.2
South Australia . . . . .	13.3	14.4	15.6	18.2	20.9
Western Australia . . . . .	12.8	15.4	18.7	22.8	28.6
Tasmania . . . . .	5.9	6.5	7.2	8.4	9.8
Total States . . . . .	161.7	179.3	202.3	235.0	273.9
Total current expenditure . . . . .	174.1	193.2	218.8	255.1	299.1
Gross fixed capital expenditure—					
Commonwealth authorities . . . . .	1.2	1.6	1.5	2.1	2.6
State authorities—					
New South Wales . . . . .	5.3	7.2	9.3	10.6	10.5
Victoria . . . . .	4.7	7.0	4.4	3.9	5.3
Queensland . . . . .	3.2	3.9	4.6	4.4	5.4
South Australia . . . . .	0.8	0.8	1.1	1.7	1.8
Western Australia . . . . .	0.9	1.7	1.3	1.8	1.2
Tasmania . . . . .	0.8	1.2	1.2	1.8	2.1
Total States . . . . .	15.7	21.8	22.0	24.2	26.3
Total capital expenditure . . . . .	16.9	23.3	23.4	26.3	28.9
Total expenditure . . . . .	191.0	216.6	242.3	281.4	328.0

## Fire brigades

### New South Wales

A Board of Fire Commissioners, consisting of seven members, two appointed by the State Government (President and Deputy President), two representing insurance companies and one each representing local government authorities, volunteer firemen, and permanent firemen, operates under the Fire Brigades Act, 1909–1970, and 174 fire districts had been constituted at the end of 1971. The cost of maintenance of fire brigades is borne in proportions of local councils and the Government each one-eighth, and the insurance companies three-quarters.

At 31 December 1972 the actual strength of the Fire Brigade throughout the fire districts of New South Wales was 502 officers and 1,387 permanent and 2,726 volunteer firemen. Corresponding figures for the Sydney Fire District were 403, 1,173 and 215. The revenue for the year 1971 was \$15,752,771, as follows: from the Government, \$1,947,009; municipalities and shires, \$1,945,681; fire insurance companies and firms, \$11,670,234; and from other sources, \$189,847. The disbursements for the year were \$15,001,399. The Board of Fire Commissioners provides the fire protection services for Canberra, in the Australian Capital Territory, and the cost of these services is reimbursed by the Commonwealth Government.

Under the Bush Fires Act, 1949 a Bush Fire Fighting Fund exists from which finance is provided for the prevention and fighting of bush fires. Contributions to the Fund by the Government, councils and insurance companies are in the proportion of one-quarter, one-quarter and one-half, respectively. At 30 June 1972 Volunteer Brigades equipped by means of this fund numbered 2,420 with an active membership of about 60,000 persons. The expenditure from the Fund for equipment, up to 30 June 1972, amounted to \$12,148,414.

### Victoria

In Victoria, fire brigades are controlled by the Metropolitan Fire Brigades Board consisting of eight members, including an employees' representative, and the Country Fire Authority consisting of eleven members.

*Metropolitan Fire Brigades Board.* The Metropolitan Fire Brigades Board receives contributions from the municipalities and the insurance companies in the proportion of one-third and two-thirds respectively. At 30 June 1972 the Board had under its control 46 stations, 1,226 permanent staff, and 250 special service and clerical, etc. staff. The total receipts for 1971–72 were \$11,002,859, comprising contributions \$9,618,062, receipts for services \$857,798, and interest and sundries \$526,999. The expenditure was \$11,266,419.

*Country Fire Authority.* This authority is responsible for the prevention and suppression of fires in the 'country area of Victoria', which embraces the whole of the State outside the Metropolitan Fire District, excluding State forests, National Parks and certain Crown lands. The country area has been divided into twenty-five fire control regions, three of which (Ballarat, Bendigo and Geelong) are wholly urban and the remainder mixed urban and rural. The Country Fire Authority receives contributions in the proportion of two-thirds from insurance companies and one-third from the Treasury. At 30 June 1972 the Country Fire Authority Act applied to 157 insurance companies and 212 urban and 1,049 rural fire brigades. Permanent staff of the Authority totalled 319 (including administrative), while the effective strength of volunteer personnel was 113,221. Income for the year 1971–72 amounted to \$4,596,792. Total expenditure other than loan redemption and capital expenditure amounted to \$4,293,652.

### Queensland

There are two controlling bodies responsible for fire fighting services throughout Queensland. The State Fire Services Council controls brigades set up under 'The Fire Brigades Act, 1964 to 1971,' and the Rural Fires Board under provisions of 'The Rural Fires Act, 1946 to 1970' administers bush fire brigades. In addition a local authority may establish a fire fighting brigade of its own as do some major establishments such as the State Forestry Department and private companies whose activities involve fire hazards.

Fire districts are constituted under 'The Fire Brigades Act, 1964 to 1971'. For each district, there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is borne by the State Government, the component local authorities and the contributory insurance companies and owners of property (which is insured with a company other than a contributory company) in the proportions of one-eighth each by the State Government and the component local authorities, and three-quarters by the contributory companies and owners of property referred to.



At 30 June 1972 there were 81 fire brigade boards. The number of stations was 191 and the brigade strength was 1,174 permanent staff and 1,320 auxiliary and 27 volunteer staff. The total revenue for the year 1971-72 was \$8,906,391 received mainly from the following sources: Government \$1,064,363, local authorities \$1,064,363, insurance companies \$6,419,752. Loan receipts (Government and other) were \$739,549. The total expenditure for the year was \$8,308,874, the chief items being salaries and wages \$6,598,217, and interest and redemption of loans \$767,998.

The Rural Fires Board, operating under the *Rural Fires Act* 1946 to 1970, consists of a chairman and nine members all of whom are appointed by the Governor-in-Council. Eight of the members are from Government Departments, the other represents the United Graziers Association. For administrative purposes the State is divided into Rural Fire Districts under the control of a Chief Fire Warden, and in these districts fire wardens are appointed to assigned areas. These officers control the issuing of permits, reporting of fire hazards and education in fire protection, while the bush fire brigades operate on a voluntary basis under the control of an appointed first officer. At 30 June 1972 there were 1,084 bush fire brigades. Expenditure by the State Government including contributions by bush fire brigades for equipment during 1971-72 amounted to \$131,334.

### South Australia

The Fire Brigades Act, 1936-1958 provides for a board of five members, that the expenses and maintenance of brigades are defrayed in the proportion of two-ninths by the Treasury, five-ninths by insurance companies and two-ninths by the municipalities concerned, and that when the Treasury proportion exceeds its statutory contribution of approximately \$31,000, the excess is borne five-sevenths by insurance companies and two-sevenths by the municipalities. At 30 June 1972 there were altogether 39 fire brigade stations, of which 18 were metropolitan and 21 country.

The strength of the permanent staff at 30 June 1972 was 575, comprising 403 officers and men, 116 country auxiliary firemen and 56 other employees (including maintenance workers). The total revenue for the year 1971-72 was \$2,695,962, including contributions of \$2,357,553 made up as follows: insurance companies \$1,414,140, Treasury \$395,000 and municipalities \$548,413. The Treasury contribution includes a special grant of \$292,308.

### Western Australia

The *Fire Brigades Act* 1942-1972 provides for the constitution of fire districts which are under the control of the Western Australian Fire Brigades Board. There were 69 fire districts at 30 June 1972. The contribution to the Board is made in the proportion of 16 per cent from the State Government, 20 per cent from local government authorities, and 64 per cent from insurance companies. The number of local government authorities and insurance companies who contributed numbered 81 and 163 respectively. Seventeen permanent and two volunteer brigades operate in the metropolitan fire district centred in the City of Perth. Permanent brigade personnel serve with volunteer brigade personnel in five large country centres and volunteer brigades provide town fire protection at some 67 other centres. At 30 June 1972 the Board had 581 employees and there were 1,555 volunteer brigade officers and firemen. The revenue for the year ended 30 June 1972 was \$4,228,959 and the expenditure \$4,288,178.

Under the *Bush Fires Act, 1954-1970* a Bush Fires Board, consisting of thirteen members, six of whom are nominated by the Country Shire Councils' Association, was set up to advise the Minister for Lands on bush fire control and to administer the Bush Fires Act. The Act also provides for the registration of bush fire control officers, who numbered 2,407 at 30 June 1972, and the establishment of bush fire brigades, 915 at 30 June 1972. Many individual brigades are large organisations with numerous self-contained sections.

### Tasmania

The *Fire Brigades Act* 1945 provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of existing fire brigade boards, while leaving the responsibility for individual control and management with the boards. The Commission comprises the following: two persons nominated by the Minister; one person representing the City or Municipal Councils; one person nominated by the Chairman of the Rural Fires Board; and three persons representing the insurance companies. Contributions towards the cost of operations are on the basis of 22.5 per cent each from the Treasury and the municipalities and 55 per cent from the insurance companies concerned. The cost for the year 1971-72 amounted to \$1,563,727. There were, at 30 June 1972, 23 boards controlling 40 stations, and their aggregate staffs numbered 685 (officers and firemen), comprising 227 permanent personnel, 418 part-time firemen and 40 volunteers. The volunteers all operate under the Hobart Board in the forested and mountainous Fern Tree area.

Following the fire disaster of February 1967, amendments were made to the *Rural Fires Act* 1950. The 1967 Act brought the separate urban and rural fire services and the State Civil Defence and Emergency Services together under the Chief Secretary. The newly-constituted Rural Fires Board, under a chairman appointed by the Governor, consists of 16 members. The Board has a paid staff of 15, headed by the State Fire Control Officer and includes five regional fire officers and an assistant

regional officer. At 30 June 1972 there were 299 rural fire brigades composed of 6,883 registered volunteers. The Board's budget in 1971-72 was \$397,450. Half the administrative expenditure is met by insurance companies insuring rural properties, and half by the Government. Special fire area expenditure is borne by the Government, with remaining expenditure being shared proportionately between the Government and municipalities.

## Patents, trade marks and designs

### Patents

Patents for inventions are granted under the *Patents Act* 1952-1969, which applies to the Commonwealth of Australia and the Territories of Norfolk Island and Papua New Guinea. The Act is administered by a Commissioner of Patents. The amending Act of 1969 came into operation on 1 January 1970. Regulations under the Act provide variable fees for lodgment of applications depending on size of specifications and number of claims. The basic fee for lodging an application and complete specification is \$20.00. Examination no longer automatically follows lodgment of applications. The Commissioner may now direct an applicant to request examination in which case the examination fee is \$60.00, or the applicant may request it of his own accord, in which case the fee is \$80.00. If examination is not requested within five years after lodgment, the application lapses.

Annual taxes are payable commencing with a fee of \$8.00 after the expiration of two years from the date of lodgment of the complete specification and rising to \$50.00 after the expiration of 15 years from that date.

#### PATENTS: AUSTRALIA, 1968 TO 1972

	1968	1969	1970	1971	1972
Applications . . . . .	16,712	17,446	16,443	16,407	16,165
Applications accompanied by provisional specifications . . . . .	3,899	3,637	3,628	3,933	4,195
Letters patent sealed . . . . .	5,537	7,127	6,130	10,641	10,920

### Trade marks and designs

Under the *Trade Marks Act* 1955-1966 the Commissioner of Patents is also Registrar of Trade Marks. Provision is made for the registration of users of trade marks and for their assignment with or without the goodwill of the business concerned. A new classification of goods was adopted in 1958, and trade marks registered under repealed Acts are reclassified on renewal. Under the *Designs Act* 1906-1968 the Commissioner of Patents is also Registrar of Designs.

#### TRADE MARKS AND DESIGNS: AUSTRALIA, 1968 TO 1972

	1968	1969	1970	1971	1972
Trade marks—					
Received . . . . .	8,301	9,246	9,117	8,866	9,204
Registered . . . . .	4,612	4,809	5,823	5,710	5,012
Designs—					
Received . . . . .	1,769	1,975	2,007	1,977	2,228
Registered . . . . .	1,614	1,440	1,604	1,578	1,608

## Copyright

Copyright is regulated by the Commonwealth *Copyright Act* 1968, which came into force on 1 May 1969. On that date Australia ratified its adherence to the Brussels revision of the Berne Copyright Convention and to the Universal Copyright Convention, whereby citizens of member countries are accorded protection by complying with the convention formality requiring proprietors to place on their works the symbol © together with their name and the year of first publication, in such a manner and location as to give reasonable notice of their claim of copyright in the works so identified. The new legislation contains no provision for the registration of copyright, and the Copyright Office ceased to exist on 1 May 1969. Copyright is now administered by the Attorney-General's Department.





## CHAPTER 16

### NATIONAL ACCOUNTS

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy.

Estimates of national income and expenditure have been compiled by the Bureau since 1944–45 and have been published annually as papers entitled *National Income and Expenditure* accompanying the Commonwealth Budgets. Detailed annual estimates of national income and expenditure on a revised basis were published in *Australian National Accounts, National Income and Expenditure*, 1971–72 (7.1). Preliminary estimates (less detailed) for 1971–72 were published earlier in a Budget Paper. Quarterly estimates are published in *Quarterly Estimates of National Income and Expenditure* (7.5). A supplement to the December quarter 1972 issue of *Quarterly Estimates of National Income and Expenditure* (7.10) presented historical quarterly series of gross domestic product and related aggregates at current and constant prices consistent with the 1971–72 Australian National Accounts bulletin.

More recently, the Bureau has been engaged in the compilation of input-output tables for the Australian economy. Preliminary tables for the year 1962–63 were published in February 1971 and the final results were published in *Australian National Accounts, Input-Output Tables 1962–63* (7.11) issued in May 1973.

The figures shown on pages 484–9 are as published in *Australian National Accounts, National Income and Expenditure*, 1971–72.

### NATIONAL INCOME AND EXPENDITURE

#### Description of National Income and Expenditure Accounts

A brief description of the conceptual basis of national accounts is given in this section, but for a more detailed treatment of the concepts and structure of the Australian National Accounts reference should be made to *Australian National Accounts, National Income and Expenditure*, 1971–72.

#### Definition and relationship of the concepts of product, income and expenditure

The main concepts of product, income and expenditure in the Australian National Accounts are defined and expressed in equivalents as follows.

*Gross domestic product* is the total market value of goods and services produced in Australia within a given period after deduction of the cost of intermediate usage of goods and services but before deducting allowances for the consumption of fixed capital. Thus gross domestic product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services. *Gross farm product* is that part of gross domestic product which derives from production in rural industries. *Gross non-farm product* arises from production in all other industries.

*Gross domestic product at factor cost* is that part of the cost of producing the gross domestic product which consists of gross payments to factors of production (labour, land, capital, and enterprise). It represents the value added by these factors in the process of production and is equivalent to gross domestic product less indirect taxes plus subsidies.

*Domestic factor incomes* is that part of the value added within a given period by factors of production (labour, land, capital and enterprise) which accrues as income to their suppliers after allowing for the depreciation of fixed capital. It is equivalent to gross domestic product at factor cost less depreciation allowances.

*National income* is the net income accruing within a given period to Australian residents from their services in supplying factors of production (labour, land, capital and enterprise) in Australia or overseas plus indirect taxes less subsidies. It is equivalent to domestic factor incomes plus indirect taxes less subsidies and net income paid overseas.

*National disposable income* is the net income accruing within a given period to Australian residents from their services in supplying factors of production, from net indirect taxes and from re-distributive transfers. It is equivalent to national income less net transfers overseas.

*Gross national expenditure* is the total expenditure within a given period on final goods and services (i.e. excluding goods and services used up during the period in the process of production) bought by Australian residents. It is equivalent to the gross domestic product plus imports of goods and services less exports of goods and services.

*Household income* is the total income whether in cash or kind, received by persons normally resident in Australia in return for productive activity (such as wages and supplements, incomes of unincorporated enterprises etc.) and transfer incomes (such as cash social service benefits, interest etc.). It includes the imputed interest of life offices and superannuation funds, which is the benefit accruing to policy holders and members from investment income of the funds. However, it excludes any income which might be said to accrue to persons in the form of undistributed company income. It also includes any property income received by non-profit organisations such as private schools, churches, charitable organisations, etc.

#### Framework of accounts and sectors

In the accounts shown in this Year Book four internal institutional sectors are distinguished—corporate trading enterprises (including public trading enterprises), financial enterprises (including the nominal industry), households (including their unincorporated enterprises) and general government. All of these internal sectors engage in production activity, receive and disburse income and accumulate assets. Without distinguishing between internal sectors, their transactions are summarised in three accounts, a domestic production account (Table 1), a national income and outlay account (Table 3) and a national capital account (Table 4). In addition there is an overseas sector having an account (Table 6) which shows a summary of the transactions into which overseas governments, persons and businesses enter with Australian residents. These four accounts form a system which though not detailed is complete in that, in principle, a credit in any account is matched by a debit in some other account. Income and outlay accounts are shown also for each of the four domestic sectors. The national income and outlay account is a consolidation of the income and outlay accounts of the four domestic sectors. The sector income and outlay accounts can together take the place of the national income and outlay account to provide a more detailed system.

The framework of sectors and accounts underlying the form of social accounts shown in this publication is set out in the following diagram. The heavy rectangles depict the minimum system of four accounts which represent the consolidated accounts of the nation. The light rectangles represent the accounts for institutional sectors. The sector income and outlay accounts are shown in this Year Book. The sector capital accounts are published in *Australian National Accounts, National Income and Expenditure, 1971-72* (Reference 7.1). The sub-division of the domestic production account represents production accounts for establishments classified according to industry. Selected transactions from such production accounts are shown in Reference 7.1 mentioned above, and such production accounts can be developed in detail to produce input-output accounts.

### ARTICULATION OF AUSTRALIAN NATIONAL ACCOUNTS

#### I. DOMESTIC PRODUCTION ACCOUNT

Industry (Establishments by kind of economic activity)							
Primary	Mining	Manufacturing	Building	Transport	Commerce	Finance	etc.

#### II. NATIONAL INCOME AND OUTLAY ACCOUNT

Corporate trading enterprises (including public trading enterprises)	Financial enterprises (including the nominal industry)	Households (including unincorporated enterprises)	General government
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#### III. NATIONAL CAPITAL ACCOUNT

Corporate trading enterprises (including public trading enterprises)	Financial enterprises (including the nominal industry)	Households (including unincorporated enterprises)	General government
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#### IV. OVERSEAS TRANSACTIONS ACCOUNT

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### Description of the accounts

The *domestic production account* is a consolidation of the production accounts of all producers regardless of sector. The production account is shown as receiving revenue from the sale of goods and services to final buyers; all intermediate goods and services are cancelled out, since they represent a cost to one producer to offset the revenue of the other. On the payments side are shown the payments of indirect taxes less subsidies, and, since the account is presented from the point of view of the producing unit, the wages and salaries paid to employees. The balance is the gross operating surplus which may be divided into depreciation allowances and net operating surplus. Depreciation allowances is carried to the national capital account (or the sector capital accounts) and net operating surplus, together with wages and salaries and indirect taxes less subsidies, is carried to the national income and outlay account (or sector income and outlay accounts). In input-output tables, the national production account is broken up into accounts for separate industries, and transactions associated with intermediate usage of goods and services are shown in the production accounts for the separate industries.

The *national income and outlay account* is shown as receiving wages, salaries and supplements, net operating surplus and indirect taxes less subsidies from the domestic production account. From this income are deducted net payments of income and miscellaneous transfers to overseas, and the remainder is the national disposable income. The outlay side of the account shows this disposable income is largely used for final consumption expenditure and the balance is the nation's saving. The national income and outlay account is a consolidation of the sector income and outlay accounts.

The *national capital account* is a consolidation of the sector capital accounts. It shows on the receipts side depreciation allowances transferred from the domestic production account and saving transferred from the national income and outlay account (or from the sector income and outlay accounts). On the payments side are shown purchases by all sectors of new buildings and capital equipment, the increase in stocks of all sectors and a balance described as net lending to overseas. This concept of net lending to overseas includes increases (and, negatively, decreases) in Australia's overseas monetary reserves. The net lending to overseas is also the balance on current transactions in the overseas transactions account.

The *overseas transactions account* records all transactions of a current nature between Australian and overseas residents. Although this is an account for the overseas sector, the items are named from the Australian viewpoint. The account shows that Australia's current receipts from overseas consist of the value of (Australia's) exports of goods and services, property income received from overseas and transfers from overseas. These receipts are used for (Australia's) imports of goods and services and payments of property income and transfers to overseas; and the balance of current receipts represents net lending to overseas. Positive net lending to overseas corresponds to a surplus on current transactions with overseas and negative net lending corresponds to a deficit. The transactions in property income shown in this account differ from estimates shown in balance of payments statistics because in the national accounts undistributed company income is not imputed to the beneficial owners. For this reason, also, net lending to overseas differs from the balance on current account shown in balance of payments statistics.

The *corporate trading enterprises (including public trading enterprises) income and outlay account* is shown as receiving the net operating surpluses of trading enterprise companies and public trading enterprises from the domestic production account and property income (interest, etc. and dividends) from other sectors. This total of receipts is appropriated to various transfer payments (interest, etc. paid, income tax payable, dividends paid, and public enterprise income) and undistributed income which is the saving of the sector. Public trading enterprises are not shown to have any saving. Public enterprise income is here measured by the net operating surplus and the whole amount is transferred to the general government income and outlay account. Also, as property income received and paid by public trading enterprises have not been distinguished from property income received and paid by general government, the interest and dividends shown in this account are only those received and paid by companies.

The *financial enterprises (including the nominal industry) income and outlay account* is shown receiving net operating surplus from the domestic production account and property income from other sectors. This total of receipts is appropriated to various transfer payments (interest, etc., income tax and dividends) and the saving of the sector consisting of retained income of public financial enterprises and undistributed income of companies. The disbursements shown for the sector include interest on life and superannuation funds imputed to households. This represents earnings accumulated for policy holders and members and is shown as paid to the household income and outlay account where it contributes to household saving.



The *households (including unincorporated enterprises) income and outlay account* is shown receiving net operating surplus from the domestic production account in respect of unincorporated enterprises and dwellings owned by persons. In order to show the net income from these activities, related interest payments (which could be shown on the disbursements side) are here shown as a deduction from net operating surplus. Wages, salaries and supplements is also received from the domestic production account. In addition to these primary incomes, transfer incomes are received from other sectors (interest, etc., dividends, cash benefits from general government and transfers from overseas). On the disbursements side are shown payments for goods and services for final consumption and transfer payments (consumer debt interest, taxes and transfers overseas). The balance is the saving of the sector which is transferred to the sector capital account.

Household income includes interest on life and superannuation funds but not pensions received from superannuation funds nor claims on life insurance policies. These are treated as capital transactions involving only the exchange of one asset (equity in life insurance and superannuation funds) for another (cash). However, age and invalid pensions paid by general government are included in household income.

Estate and gift duties are treated as current receipts by general government and also as current payments by persons even though the individual payers may regard them as of a capital nature. All personal gifts and transfers to or from overseas are also treated as current. Personal transfers to and from overseas include such items as legacies and migrants' funds, which the persons concerned may think of as of a capital nature.

Net current expenditure on goods and services by non-profit organisations serving persons is included in private final consumption expenditure. Expenditure on buildings (e.g. churches, private schools, clubs) is treated as capital expenditure and excluded from this account.

The *general government income and outlay account* reflects a distinction between current and capital expenditure, which is necessarily arbitrary in some measure and has been made on the basis of excluding from current outlay expenditure on public works and increase in stocks. Expenditure on public works is taken to include new buildings, construction, plant and machinery and any replacement of assets charged to loan funds or capital works votes. Current outlay excludes all expenditure on roads, because a satisfactory distinction between new works and maintenance cannot be made. All defence expenditure is included in current outlay.

The income from public enterprises shown in this account consists of the income actually transferred to general government by public financial enterprises, and the whole of the income of public trading enterprises as measured by their net operating surplus. The net operating surplus of public trading enterprises is derived by deducting from their gross operating surplus any depreciation shown by these enterprises in their published accounts, except in the case of enterprises which are at present analysed on the basis of cash accounts in which depreciation is not allowed (usually enterprises whose accounts are included in Commonwealth or State public accounts). As in the case of households, all overseas gifts are included in the income and outlay account. These include gifts for international relief, technical assistance, etc., grants, contributions to international organisations and expenditure in connection with the administration of Papua New Guinea.

### **Estimates at constant prices**

For certain types of economic analysis it is useful to examine estimates of the principal flows of goods and services in the economy revalued in such a way as to remove the direct effects of changes in their prices which have occurred over the period under review. Such estimates, conventionally described as 'at constant prices', are presented in Tables 2 and 5 for gross domestic product, exports and imports of goods and services, and gross national expenditure and its principal components.

In concept, constant price estimates may be thought of as being derived by expressing the value of every component commodity as the product of a price and a quantity, and by substituting for each actual current price the corresponding price in the chosen base year. Aggregates at constant prices for each year are then obtained by summation. In practice, the quality and quantity of the available data are such that a number of methods are used in the preparation of estimates at constant prices. These estimates involve approximations and assumptions, and this should be borne in mind in the interpretation and use of the results.

Gross domestic product is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services. This relationship has been used in deriving the estimates of gross domestic product at constant prices shown in Table 2. Their sub-division into gross farm product and gross non-farm product has been estimated by deriving gross farm product by the production method (revaluing farm output and farm usage of intermediate goods and services to obtain gross farm product as the difference) and deducting this from total gross domestic product to obtain gross non-farm product.

For a considerable part of personal consumption expenditure and exports and imports of goods and services, it is possible to identify specific units of quantity and price, and revalue the quantities at base year prices. Where it is not possible to express the values in successive years as the product of prices and homogeneous units of quantity, the treatment generally adopted is to divide values by appropriate price indexes.

With the remaining components of gross national expenditure, a greater degree of approximation and assumption is involved. For example, when information about the commodity content of a flow is limited (e.g. various components of gross fixed capital expenditure), special purpose price indexes relating to selected commodities are applied to the expenditure on the full range of commodities they represent. In other cases, for instance, where the expenditure relates to 'unique' goods (e.g. goods not homogeneous from year to year), revaluation is achieved by use of an index reflecting the price change of the direct materials and direct labour components of the unique goods in question. This method of revaluation is also applied to government final consumption expenditure. The resulting estimates have, therefore, considerable limitations for many uses, for example in studies of productivity.

The method used to estimate the increase in stocks involves first reducing the increase in book values of stocks by an estimate of the stock valuation adjustment to obtain the measures at current prices, and then revaluing the latter to arrive at the estimates at constant prices. The stock valuation adjustment has to be made because existing stocks are sometimes explicitly revalued (for example, such revaluations are sometimes made by business enterprises so as to show stocks at the lower of cost or market value for balance sheet purposes) or more commonly, because stocks used or disposed of are replaced by new stocks of the same goods but at different prices.

Part 1 of *Australian National Accounts, National Income and Expenditure, 1971-72* contains a fuller discussion of the conceptual problems involved in making these estimates and Appendix B of that publication contains a brief account of the sources and methods used in preparing the estimates.

#### Reliability and revisions

Estimates of national income and expenditure are necessarily prepared from a very wide range of statistical information, some of which is available quickly, some of it only with a delay of several years after the period to which it relates. Some of it is closely related to the desired national income concepts, but some of it is not completely satisfactory in various respects, including coverage, concepts and timing. Estimates, in particular for the most recent years, are therefore subject to revision.

This applies particularly to estimates based on income tax statistics—income of companies, non-farm unincorporated enterprises, depreciation, and part of gross private fixed investment—which are subject to substantial revisions for the last two years, as tabulations of income tax statistics do not become available until about twenty-two months after the end of each financial year.

It is not possible to put precise limits on the degree of revision likely to any particular series, nor to state degrees of reliability in a statistical sense. These depend in large part on the range and quality of the basic statistical data. For illustrations of common causes of revisions reference should be made to *Australian National Accounts, National Income and Expenditure, 1971-72*.

## National income and expenditure tables

(For explanatory note on item numbers see Note following Table 3.)

TABLE 1  
DOMESTIC PRODUCTION ACCOUNT  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Final consumption expenditure—					
1 Private . . . . .	15,009	16,161	17,702	19,419	21,325
2 Government . . . . .	3,082	3,364	3,677	4,258	4,831
Gross fixed capital expenditure—					
3 Private . . . . .	4,156	4,688	5,204	5,812	6,104
4 Public enterprises . . . . .	1,339	1,396	1,531	1,578	1,779
5 General government . . . . .	1,033	1,140	1,224	1,354	1,506
6 Increase in stocks . . . . .	128	668	495	445	-111
7 Statistical discrepancy . . . . .	-128	-91	-60	-96	168
<i>Gross national expenditure</i> . . . . .	24,619	27,326	29,773	32,770	35,602
8 Exports of goods and services . . . . .	3,568	3,901	4,755	5,054	5,638
9 Less Imports of goods and services . . . . .	4,155	4,276	4,764	5,122	5,238
<b>Expenditure on gross domestic product</b> . . . . .	<b>24,032</b>	<b>26,951</b>	<b>29,764</b>	<b>32,702</b>	<b>36,002</b>
10 Wages, salaries and supplements . . . . .	12,678	14,028	15,735	18,056	20,153
Gross operating surplus—					
Trading enterprises—					
11a Companies . . . . .	3,515	3,957	4,499	4,574	4,695
11b Unincorporated enterprises . . . . .	3,500	4,137	4,167	4,182	4,611
11c Dwellings owned by persons . . . . .	1,143	1,274	1,449	1,685	1,901
11d Public enterprises . . . . .	836	948	1,061	1,048	1,149
11e Financial enterprises . . . . .	409	458	496	616	674
11f Less Imputed bank service charge . . . . .	541	604	674	771	884
<i>Gross domestic product at factor cost</i> . . . . .	21,540	24,198	26,733	29,390	32,299
12 Indirect taxes less subsidies . . . . .	2,492	2,753	3,031	3,312	3,703
<b>Gross domestic product</b> . . . . .	<b>24,032</b>	<b>26,951</b>	<b>29,764</b>	<b>32,702</b>	<b>36,002</b>
Gross farm product . . . . .	1,838	2,333	2,182	2,004	2,209
Gross non-farm product . . . . .	22,194	24,618	27,582	30,698	33,793

TABLE 2  
EXPENDITURE ON GROSS DOMESTIC PRODUCT AT AVERAGE 1966-67 PRICES  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Final consumption expenditure—					
Private . . . . .	14,542	15,238	16,110	16,655	17,226
Government . . . . .	2,942	3,057	3,123	3,269	3,329
Gross fixed capital expenditure—					
Private . . . . .	4,055	4,417	4,712	4,954	4,860
Public . . . . .	2,293	2,359	2,445	2,456	2,592
Increase in stocks . . . . .	139	699	480	442	-139
Statistical discrepancy . . . . .	-120	-77	-45	-71	142
<i>Gross national expenditure</i> . . . . .	23,849	25,692	26,825	27,705	28,009
Exports of goods and services . . . . .	3,692	3,962	4,714	5,112	5,548
Less Imports of goods and services . . . . .	4,151	4,272	4,708	4,867	4,774
<b>Gross domestic product</b> . . . . .	<b>23,391</b>	<b>25,382</b>	<b>26,832</b>	<b>27,950</b>	<b>28,783</b>
Gross farm product . . . . .	2,046	2,639	2,547	2,552	2,743
Gross non-farm product . . . . .	21,345	22,743	24,285	25,398	26,041



TABLE 3  
NATIONAL INCOME AND OUTLAY ACCOUNT  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
10 Wages, salaries and supplements . . . . .	12,678	14,028	15,735	18,056	20,153
11g Net operating surplus . . . . .	6,631	7,742	8,333	8,484	9,081
<i>Domestic factor incomes</i> . . . . .	19,309	21,770	24,068	26,540	29,234
13 Less Net income paid overseas . . . . .	266	305	388	365	383
12a Indirect taxes . . . . .	2,685	2,975	3,293	3,590	4,075
12b Less Subsidies . . . . .	193	222	262	278	372
<i>National income</i> . . . . .	21,535	24,218	26,711	29,487	32,554
14 Less Net transfers to overseas . . . . .	81	84	108	138	151
<i>National disposable income</i> . . . . .	21,454	24,136	26,603	29,349	32,403
<i>Final consumption expenditure—</i>					
1 Private . . . . .	15,009	16,161	17,702	19,419	21,325
2 Government . . . . .	3,082	3,364	3,677	4,258	4,831
15 } Saving . . . . .	3,363	4,609	5,224	5,672	6,247
20 } Disposal of income . . . . .	21,454	24,136	26,603	29,349	32,403

NOTE. Items in all current price tables are numbered from 1 to 24, with or without the addition of a letter, and this system is used to identify the corresponding credit and debit entries in the accounts and as a key to the notes on pages 490-3. In some cases the items correspond exactly, while in other cases an entry in one table is the sum of two or more entries in other tables; here the total is given a number, and the components have a number and a letter. In the remaining type of case all entries are given the same number and a distinguishing letter, because in this group one item is not the sum of one or more entries. The relationship between these items can still be traced through because the sum of all credit entries must equal the sum of all debit entries.

TABLE 4  
NATIONAL CAPITAL ACCOUNT  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
11h Depreciation allowances . . . . .	2,231	2,428	2,665	2,850	3,065
<i>Saving—</i>					
15 Increase in income tax provisions . . . . .	84	205	294	-23	95
16 Undistributed (company) income . . . . .	767	872	855	768	579
17 Retained income of public financial enterprises . . . . .	57	82	84	101	107
18 Household saving . . . . .	1,104	1,785	1,883	2,632	3,056
19 General government surplus on current transactions . . . . .	1,275	1,619	2,056	2,142	2,352
20 General government grants for private capital purposes . . . . .	76	46	52	52	58
<i>Finance of gross accumulation</i> . . . . .	5,594	7,037	7,889	8,522	9,312
<i>Gross fixed capital expenditure—</i>					
<i>Private—</i>					
3a Dwellings . . . . .	1,112	1,299	1,490	1,535	1,749
3b Other building and construction . . . . .	884	1,014	1,114	1,387	1,440
3c All other . . . . .	2,160	2,375	2,600	2,890	2,915
4 Public enterprises . . . . .	1,339	1,396	1,531	1,578	1,779
5 General government . . . . .	1,033	1,140	1,224	1,354	1,506
<i>Total gross fixed capital expenditure</i> . . . . .	6,528	7,224	7,959	8,744	9,389
<i>Increase in stocks—</i>					
6a Farm . . . . .	-153	348	78	-115	-136
6b Non-farm . . . . .	281	320	417	560	25
7 Statistical discrepancy . . . . .	-128	-91	-60	-96	168
21 Net lending to overseas . . . . .	-934	-764	-505	-571	-134
<i>Gross accumulation</i> . . . . .	5,594	7,037	7,889	8,522	9,312

TABLE 5  
GROSS FIXED CAPITAL EXPENDITURE AND INCREASE IN STOCKS AT  
AVERAGE 1966-67 PRICES  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Gross fixed capital expenditure—					
Private—					
Dwellings . . . . .	1,079	1,226	1,353	1,329	1,409
Other building and construction . . . . .	860	942	990	1,158	1,122
All other . . . . .	2,115	2,249	2,370	2,467	2,328
<i>Total private</i> . . . . .	<i>4,055</i>	<i>4,417</i>	<i>4,712</i>	<i>4,954</i>	<i>4,860</i>
Public . . . . .	2,293	2,359	2,445	2,456	2,592
<i>Total</i> . . . . .	<i>6,347</i>	<i>6,776</i>	<i>7,157</i>	<i>7,410</i>	<i>7,451</i>
Increase in stocks—					
Farm . . . . .	280	310	414	566	—24
Non-farm . . . . .	—141	390	66	—124	—115
<i>Total</i> . . . . .	<i>139</i>	<i>699</i>	<i>480</i>	<i>442</i>	<i>—139</i>

TABLE 6  
OVERSEAS TRANSACTIONS ACCOUNT  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
9a Imports f.o.b. . . . .	3,159	3,203	3,553	3,790	3,790
9b Transportation . . . . .	655	699	754	836	849
9c Travel . . . . .	147	157	186	199	266
9d Government transactions . . . . .	95	111	124	127	123
9e Other goods and services . . . . .	99	106	147	170	210
9 <i>Imports of goods and services</i> . . . . .	<i>4,155</i>	<i>4,276</i>	<i>4,764</i>	<i>5,122</i>	<i>5,238</i>
13a Property income to overseas . . . . .	375	435	519	515	583
14a Personal transfers overseas . . . . .	86	92	114	134	172
14b General government transfers overseas . . . . .	154	160	180	185	205
21 Net lending to overseas . . . . .	—934	—764	—505	—571	—134
<i>Use of current receipts</i> . . . . .	<i>3,836</i>	<i>4,199</i>	<i>5,072</i>	<i>5,385</i>	<i>6,064</i>
8a Exports f.o.b. . . . .	2,942	3,217	3,967	4,216	4,729
8b Transportation . . . . .	362	392	445	472	511
8c Travel . . . . .	88	107	120	136	135
8d Government transactions . . . . .	76	80	87	81	90
8e Other goods and services . . . . .	100	105	136	149	173
8 <i>Exports of goods and services</i> . . . . .	<i>3,568</i>	<i>3,901</i>	<i>4,755</i>	<i>5,054</i>	<i>5,638</i>
13b Property income from overseas . . . . .	109	130	131	150	200
14c Personal transfers from overseas . . . . .	159	168	186	181	226
<i>Current receipts from overseas</i> . . . . .	<i>3,836</i>	<i>4,199</i>	<i>5,072</i>	<i>5,385</i>	<i>6,064</i>

TABLE 7  
CORPORATE TRADING ENTERPRISES (INCLUDING PUBLIC TRADING ENTERPRISES)  
INCOME AND OUTLAY ACCOUNT  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Net operating surplus—					
11i Trading enterprise companies . . . . .	2,532	2,884	3,302	3,274	3,286
11j Public trading enterprises . . . . .	512	579	645	619	678
13c Interest etc. received . . . . .	148	165	184	206	237
13d Dividends received . . . . .	58	67	69	72	74
<b>Receipts . . . . .</b>	<b>3,250</b>	<b>3,695</b>	<b>4,200</b>	<b>4,171</b>	<b>4,275</b>
13e Interest etc. paid . . . . .	485	545	652	759	856
22a Public enterprise income . . . . .	512	579	645	619	678
Company income—					
15a Income tax payable . . . . .	938	1,080	1,354	1,332	n.a.
13f Dividends paid . . . . .	669	720	798	824	n.a.
16a Undistributed income . . . . .	646	771	751	637	n.a.
	2,253	2,571	2,903	2,793	2,741
<b>Disbursements . . . . .</b>	<b>3,250</b>	<b>3,695</b>	<b>4,200</b>	<b>4,171</b>	<b>4,275</b>

TABLE 8  
FINANCIAL ENTERPRISES (INCLUDING THE NORMAL INDUSTRY) INCOME AND  
OUTLAY ACCOUNT  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
11k Net Operating surplus . . . . .	362	398	419	520	559
11f Less imputed bank service charge . . . . .	541	604	674	771	884
13g Interest etc. received . . . . .	1,345	1,534	1,743	2,031	2,355
13h Dividends received . . . . .	73	88	99	109	122
<b>Receipts . . . . .</b>	<b>1,239</b>	<b>1,416</b>	<b>1,587</b>	<b>1,889</b>	<b>2,152</b>
13i Interest on life and superannuation funds imputed to households . . . . .	381	427	472	538	622
13j Other interest etc. paid . . . . .	498	589	687	832	1,005
15b Income tax on life and superannuation funds . . . . .	13	16	18	19	20
Public enterprise income—					
22b Paid to general government . . . . .	30	36	37	57	63
17 Retained income . . . . .	57	82	84	101	107
	87	118	121	158	170
Company income—					
15c Income tax payable . . . . .	78	90	103	121	n.a.
13k Dividends paid . . . . .	61	75	82	90	n.a.
16b Undistributed income . . . . .	121	101	104	131	n.a.
	260	266	289	342	335
<b>Disbursements . . . . .</b>	<b>1,239</b>	<b>1,416</b>	<b>1,587</b>	<b>1,889</b>	<b>2,152</b>



TABLE 9  
HOUSEHOLD (INCLUDING UNINCORPORATED ENTERPRISES) INCOME AND  
OUTLAY ACCOUNT  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Net operating surplus—					
11i Dwellings owned by persons . . . . .	940	1,051	1,205	1,417	1,608
11m Unincorporated enterprises . . . . .	2,826	3,434	3,436	3,425	3,834
13i Less Interest, etc., paid relating thereto . . . . .	601	690	802	925	1,043
Income from unincorporated enterprises and dwellings owned by persons . . . . .	3,165	3,795	3,839	3,917	4,399
10 Wages, salaries and supplements . . . . .	12,678	14,028	15,735	18,056	20,153
13i Interest on life and superannuation funds (imputed) . . . . .	381	427	472	538	622
13m Other interest, etc., received . . . . .	569	642	738	836	963
13n Dividends received . . . . .	465	478	502	543	565
23 Cash benefits from general government . . . . .	1,323	1,442	1,638	1,819	2,113
14c Transfers from overseas . . . . .	159	168	186	181	226
<b>Receipts . . . . .</b>	<b>18,740</b>	<b>20,980</b>	<b>23,110</b>	<b>25,890</b>	<b>29,041</b>
1 Private final consumption expenditure . . . . .	15,009	16,161	17,702	19,419	21,325
13o Consumer debt interest . . . . .	136	154	165	191	215
15d Income tax payable . . . . .	2,083	2,427	2,861	3,108	3,836
24 Other direct taxes, fees, fines, etc. . . . .	322	361	385	406	437
14a Transfers overseas . . . . .	86	92	114	134	172
18 Saving . . . . .	1,104	1,785	1,883	2,632	3,056
<b>Disbursements . . . . .</b>	<b>18,740</b>	<b>20,980</b>	<b>23,110</b>	<b>25,890</b>	<b>29,041</b>

TABLE 10  
GENERAL GOVERNMENT INCOME AND OUTLAY ACCOUNT  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
22 Income from public enterprises . . . . .	542	615	682	676	741
13p Interest, etc., received . . . . .	181	197	230	277	275
12a Indirect taxes . . . . .	2,685	2,975	3,293	3,590	4,075
15e Direct taxes on income . . . . .	3,028	3,408	4,042	4,603	5,283
21 Other direct taxes, fees, fines, etc. . . . .	322	361	385	406	437
<b>Receipts . . . . .</b>	<b>6,758</b>	<b>7,556</b>	<b>8,632</b>	<b>9,552</b>	<b>10,811</b>
2 Final consumption expenditure . . . . .	3,082	3,364	3,677	4,258	4,831
12b Subsidies . . . . .	193	222	262	278	372
13q Interest, etc., paid . . . . .	655	703	767	818	880
23 Cash benefits to persons . . . . .	1,323	1,442	1,638	1,819	2,113
20 Grants for private capital purposes . . . . .	76	46	52	52	58
14b Transfers overseas . . . . .	154	160	180	185	205
19 Surplus on current transactions . . . . .	1,275	1,619	2,056	2,142	2,352
<b>Disbursements . . . . .</b>	<b>6,758</b>	<b>7,556</b>	<b>8,632</b>	<b>9,552</b>	<b>10,811</b>

TABLE 11  
MAIN AGGREGATES AT CURRENT PRICES, 1948-49 TO 1971-72  
(\$ million)

		1	2	3	4	5	6	7
		Final consumption expenditure		Private gross fixed capital expenditure	Public gross fixed capital expenditure	Increase in stocks	Statistical discrepancy	Gross national expenditure (1 to 6)
Year		Private	Government					
1948-49	. .	3,001	354	497	295	37	-32	4,152
1949-50	. .	3,457	426	644	420	72	27	5,046
1950-51	. .	4,209	588	921	603	144	-64	6,401
1951-52	. .	5,017	806	1,132	806	384	66	8,211
1952-53	. .	5,326	929	1,143	794	-256	-246	7,690
1953-54	. .	5,849	878	1,320	808	66	-113	8,808
1954-55	. .	6,362	941	1,482	871	173	35	9,864
1955-56	. .	6,839	1,049	1,640	927	208	-62	10,601
1956-57	. .	7,312	1,093	1,717	950	-46	-167	10,859
1957-58	. .	7,666	1,131	1,858	998	14	-20	11,647
1958-59	. .	8,069	1,233	1,922	1,100	277	-84	12,517
1959-60	. .	8,853	1,323	2,191	1,214	152	89	13,822
1960-61	. .	9,391	1,422	2,415	1,256	480	17	14,981
1961-62	. .	9,676	1,543	2,328	1,402	-218	-115	14,616
1962-63	. .	10,366	1,652	2,580	1,451	260	-112	16,197
1963-64	. .	11,177	1,804	2,919	1,602	125	-115	17,512
1964-65	. .	12,080	2,066	3,410	1,854	569	19	19,998
1965-66	. .	12,818	2,408	3,656	2,058	117	-69	20,988
1966-67	. .	13,791	2,727	3,829	2,168	360	-116	22,759
1967-68	. .	15,009	3,082	4,156	2,372	128	-128	24,619
1968-69	. .	16,161	3,364	4,688	2,536	668	-91	27,326
1969-70	. .	17,702	3,677	5,204	2,755	495	-60	29,773
1970-71	. .	19,419	4,258	5,812	2,932	445	-96	32,770
1971-72	. .	21,325	4,831	6,104	3,285	-111	168	35,602

Year	8	9	10	11	12	13	14
	(7 + 8 - 9)			<i>Gross domestic product at factor cost</i>	<i>National income</i>	<i>Household income</i>	<i>Wages, salaries and supplements</i>
	<i>Exports of goods and services</i>	<i>Imports of goods and services</i>	<i>Gross domestic product</i>				
1948-49	1,146	979	4,319	3,890	4,033	3,771	2,169
1949-50	1,307	1,260	5,093	4,588	4,691	4,419	2,471
1950-51	2,092	1,726	6,767	6,194	6,278	6,063	3,112
1951-52	1,486	2,437	7,260	6,446	6,848	6,288	3,938
1952-53	1,855	1,312	8,233	7,443	7,741	7,036	4,259
1953-54	1,793	1,601	9,000	8,105	8,406	7,365	4,538
1954-55	1,707	1,983	9,588	8,608	8,894	7,883	4,968
1955-56	1,740	1,953	10,388	9,325	9,596	8,556	5,449
1956-57	2,190	1,736	11,313	10,116	10,453	9,141	5,764
1957-58	1,847	1,925	11,569	10,272	10,527	9,145	5,987
1958-59	1,868	1,960	12,425	11,077	11,283	9,843	6,281
1959-60	2,150	2,286	13,686	12,211	12,440	10,808	6,970
1960-61	2,175	2,603	14,553	12,982	13,190	11,612	7,509
1961-62	2,470	2,205	14,881	13,335	13,442	12,018	7,732
1962-63	2,494	2,620	16,071	14,418	14,524	12,792	8,161
1963-64	3,163	2,873	17,802	16,017	16,096	14,146	8,875
1964-65	3,049	3,485	19,562	17,592	17,683	15,436	9,919
1965-66	3,138	3,629	20,497	18,348	18,439	16,189	10,687
1966-67	3,487	3,711	22,535	20,253	20,268	17,894	11,658
1967-68	3,568	4,155	24,032	21,540	21,535	18,740	12,678
1968-69	3,901	4,276	26,951	24,198	24,218	20,980	14,028
1969-70	4,755	4,764	29,764	26,733	26,711	23,110	15,735
1970-71	5,054	5,122	32,702	29,390	29,487	25,890	18,056
1971-72	5,638	5,238	36,002	32,299	32,554	29,041	20,153

## Description of items in the National Income and Expenditure Accounts

*Item 1. Final consumption expenditure—private.* Net expenditure on goods and services of consumption by persons and private non-profit organisations serving households. This item excludes the purchase of dwellings and capital expenditure by non-profit organisations (included in item 3), and maintenance of dwellings (treated as expenses of private enterprises), but includes personal expenditure on motor vehicles and other durable goods and the imputed rent of owner-occupied dwellings. Purchase of motor vehicles is the estimated expenditure by persons on new motor vehicles, second-hand motor vehicles purchased from business enterprises and general government, and net dealers' margins on purchases and sales of motor vehicles between persons. Motor vehicles include cars, station wagons, motor cycles, and motor scooters bought for personal use. The value of income in kind (e.g. food produced and consumed on farms, board and lodging provided free to employees) is included in both household income and private final consumption expenditure, but goods chargeable to business (expense) accounts are excluded.

*Item 2. Final consumption expenditure—government.* Expenditure by public authorities (other than those classified as public enterprises) which does not result in the creation of fixed tangible assets or in the acquisition of land, buildings or second-hand goods. It comprises expenditure on wages, salaries, and supplements, and on goods and services other than fixed assets and stocks. Fees, etc., charged by general government for goods sold and services rendered are offset against purchases. Net expenditure overseas by general government and purchases from public enterprises are included. All government expenditure on defence is classified as final consumption expenditure.

*Item 3. Gross fixed capital expenditure—private.* Expenditure on fixed assets whether for additions or replacements. This item includes expenditure on dwellings (item 3a), other building and construction (item 3b), and vehicles, plant, machinery, etc. (item 3c). It includes also expenditure on second-hand assets as well as new assets, less sales of existing assets. Expenditure on ordinary repair and maintenance of fixed assets is excluded as being chargeable to current account. Major additions are, however, regarded as capital expenditure. Dwellings purchased by persons from public housing authorities, including previously rented houses, are included in private capital expenditure. Net purchases of other land and buildings are not included.

*Item 4. Gross fixed capital expenditure—public enterprises.* Expenditure on new fixed assets whether for additions or replacements, including wages and salaries paid by public enterprises in connection with capital works. Expenditure on houses and flats is estimated by deducting the cost of previously rented dwellings sold to the private sector from the estimated expenditure on construction of dwellings. The sales value of these previously rented dwellings is included in private capital expenditure.

*Item 5. Gross fixed capital expenditure—general government.* Expenditure on new fixed assets whether for additions or replacements, other than for defence purposes. Because it has not been possible to make a satisfactory dissection, all expenditure on roads, including maintenance, is classified as fixed capital expenditure.

*Item 6. Increase in stocks.* The increase in stocks of enterprises and general government. The increase in stocks is calculated on a quarterly basis as the difference between the beginning and end-of-quarter estimates of stock levels, both revalued at average current-quarter prices by means of appropriate price indexes.

*Item 7. Statistical discrepancy.* The difference between the sum of the direct estimates of gross domestic product and imports of goods and services on the one hand and the sum of the estimates of components of gross national expenditure and exports of goods and services on the other hand. Conceptually these two totals are the same. Inclusion of the discrepancy on the expenditure side of the domestic production account implies nothing as to the relative accuracy of the estimates of gross domestic product and national expenditure. Similarly its inclusion in the capital account does not imply that estimates in this table are less accurate than those in other tables, or that capital expenditure estimates are less accurate than estimates on the receipts side of this account.

*Item 8. Exports of goods and services.* The value of goods exported overseas and receipts from overseas for other goods and services. In Table 6 this item is sub-divided into the following components.

*Item 8a. Exports f.o.b.* The recorded trade figures adjusted for balance of payments purposes. The adjustments are similar to those made to the recorded import figures except that no change is made to the basis of valuation.

*Item 8b. Transportation.* The expenditure of overseas carriers in Australian ports, the overseas earnings of Australian shipping and airline operators in respect of passenger fares, and their earnings from freight on exports from Australia, carriage of goods between foreign ports, etc.



*Item 8c. Travel.* Expenditure in Australia of persons visiting for pleasure or business, including expenditure in Australia of foreign students studying under the Colombo Plan.

*Item 8d. Government transactions.* Receipts for services rendered by the Australian government to other governments and international organisations, including services provided under joint defence projects and payments in Australia by foreign governments on diplomatic, consular and trade representation and for pensions.

*Item 8e. Other goods and services.* The value of Australian production of gold (including recoveries from scrap) less net industrial usage, business expenses of overseas firms in Australia, and commissions, brokerage, etc.

*Item 9. Imports of goods and services.* The value of goods imported from overseas and amounts payable overseas for services. In table 6 this item is sub-divided into the following components.

*Item 9a. Imports f.o.b.* Recorded trade figures adjusted for the purpose of balance of payments estimates. The principal adjustments are the deduction of a 'valuation adjustment' representing the excess of the recorded value of imports (based on value for duty) over the estimated selling price to the importer as shown on invoices accompanying customs entries, the addition of unrecorded imports, including ships and aircraft for use on overseas routes, and the subtraction of films imported on a rental basis, imports of gold, passengers' personal effects, goods for repair and goods intended for re-export.

*Item 9b. Transportation.* Freight payable to foreign carriers on goods imported into Australia and transported between Australian ports and fares payable in Australia to overseas shipping and airline companies. It also includes the overseas expenditure of Australian ships and aircraft, and net marine insurance payable overseas in respect of both exports and imports.

*Item 9c. Travel.* Expenditure in other countries by Australians visiting overseas for pleasure or business.

*Item 9d. Government transactions.* Expenditure overseas for defence, including the pay and allowances of personnel serving overseas, expenditure overseas on diplomatic, consular and trade representation, government pensions paid abroad, administrative expenditure overseas on immigration, and other miscellaneous payments for services.

*Item 9e. Other goods and services.* Administrative and promotional expenditure overseas by Australian firms, cinema and television film rentals and commissions, brokerage, etc. payable overseas, and the value of repairs on goods previously exported for repair and return.

*Item 10. Wages, salaries and supplements.* Payments by producers to their employees in the nature of wages and salaries as defined for pay-roll tax, including allowances for income in kind (board and quarters, etc.), together with supplements to wages, and pay and allowances of members of the forces. Employees cover all persons engaged in the activities of incorporated business units and in the production of government services and services of non-profit organisations, members of the armed forces, and all persons engaged in the activities of unincorporated enterprises except the proprietors and unpaid members of the family. In addition to wages and salaries paid by employers subject to pay-roll tax, this item includes wages and salaries paid by employers not subject to pay-roll tax, based on estimates of employment and average earnings. Supplements consist of employers' contributions to pension and superannuation funds, direct payments of pensions and retiring allowances, and amounts paid as workers' compensation for injuries. Pay and allowances of members of the forces consist of active pay, field, subsistence and dependants' allowances, and the value to the members of the forces of food, clothing, normal medical attention, etc. supplied in kind. They include deferred pay, but exclude war gratuities which are included in item 23.

*Item 11. Gross operating surplus.* The operating surplus, before deduction of depreciation provisions, dividends, interest, royalties and land rent, and direct taxes payable, but after deducting stock valuation adjustment, of all enterprises, trading and financial, from operations in Australia. It is the excess of gross output over the sum of intermediate consumption, wages, salaries and supplements, and indirect taxes less subsidies. Trading enterprises include all companies, public enterprises, partnerships and self-employed persons engaged in the production of goods and services for sale, but exclude financial enterprises. Public trading enterprises are government undertakings which attempt to recover all, or a substantial part, of their costs through charges made to the public for the sale of goods and services. All owners of dwellings are included whether they let the dwellings or occupy them themselves. Trading enterprises' gross operating surplus is shown separately for companies (item 11a), unincorporated enterprises (item 11b), dwellings owned by persons (item 11c), and public enterprises (item 11d). Financial enterprises comprise banks, insurance offices, superannuation funds and other enterprises primarily engaged in incurring liabilities and acquiring financial assets

in the market. The gross operating surplus of financial enterprises (item 11e) includes an imputed bank service charge which represents a reclassification of a part of interest receipts. The imputed bank service charge (item 11f) is not allocated among customers (which would have the effect of reducing their respective operating surpluses), but is shown in the production account as a negative adjustment to operating surpluses generally. *Net operating surplus* is, in principle, the operating surplus after providing for the consumption of fixed capital, and is estimated by deducting depreciation allowances from gross operating surplus. *Depreciation allowances* are financial provisions made for depreciation and represent in the main amounts allowed under income tax legislation, but include also the estimated depreciation on tenanted and owner-occupied dwellings and provisions made by public enterprises.

*Item 12. Indirect taxes less subsidies.* Indirect taxes (item 12a) are taxes assessed on producers, i.e. enterprises and general government, in respect of the production, sale, purchase or use of goods and services, which are charged to the expenses of production. Subsidies (item 12b) are grants made by general government to enterprises which are credited to their production accounts. These grants may take the form of bounties on goods produced, payments to ensure a guaranteed price or to enable maintenance of prices of goods or services below cost of production, and other forms of assistance to producers.

*Item 13. Dividends and interest etc.* Receipts and payments of dividends including dividends paid overseas and the remitted profits of Australian branches of overseas enterprises; and receipts and payments of interest, royalties and land rent. In most tables dividends are shown separately from interest etc. The items are shown net of intra-sector receipts and payments. *Net income paid overseas* comprises payments of dividends and interest etc. to overseas less receipts of dividends and interest etc from overseas. *Interest on life and superannuation funds imputed to households* (13i), represents the net earnings after tax, of these funds from dividends, interest, rental charges and other income which are accumulated for the benefit of policy holders and members.

*Item 14. Transfers to and from overseas.* All transfers to or from overseas on public authority or private account which are not payments for goods and services or payments of dividends, interest, etc.

*Item 14a. Personal transfers overseas.* Gifts of money by resident persons and private institutions, payments for sustenance, and transfers of emigrants' funds and legacies from Australia to overseas, together with the value of goods exported as gifts.

*Item 14b. General government transfers overseas.* Grants to, and payments made on behalf of Papua New Guinea and expenditure overseas in respect of technical assistance and relief under the Colombo Plan and United Nations and other aid projects. Includes contributions to United Nations and other international organisations due by virtue of membership of these organisations.

*Item 14c. Personal transfers from overseas.* Gifts of money received from non-resident persons and private institutions, receipts for sustenance, and transfers of immigrants' funds and legacies from overseas to Australia, together with the value of goods imported as gifts.

*Item 15. Income tax.* Income tax payable by trading and financial companies (15a and 15c), life and superannuation funds (15b) and households (15d) are amounts payable at rates of taxation applicable in each year. Income tax payable by households includes the total income tax payable by individuals on all forms of income, whether wages, business income or property income. *Increase in income tax provisions*, the difference between the amounts of income tax payable in respect of the income of the year and the cash receipts by general government during the year, is a component of the savings of the nation.

*Item 16. Undistributed income.* The undistributed income of companies comprising trading enterprise companies (item 16a) and financial enterprise companies (item 16b) is the balance of company income, including dividends received from other sectors (items 13d and 13h) after deduction of income tax payable and dividends paid. No imputation is made to the beneficial owners and therefore the whole of the undistributed income is regarded as saving by resident enterprises. The income, and consequently the undistributed income, of financial enterprise companies includes increases in provisions for unexpired risks of casualty insurance companies and health insurance funds.

*Item 17. Retained income of public financial enterprises.* The net income of public financial enterprises (mainly government banks and insurance offices) less payments from net income to general government. The payments to general government may be described in the accounts of the enterprises as dividends, income tax, payments in lieu of income tax or transfers of profit. The retained income of public financial enterprises includes increases in provisions for unexpired risks of government insurance offices on casualty insurance, but excludes net earnings on life insurance funds (item 13i).



*Item 18. Household saving.* The excess of household income over the sum of private final consumption expenditure, interest paid, income tax payable, other direct taxes, fees, fines, etc., and transfers overseas. Household saving is estimated as the balancing item in the household income and outlay account. It includes saving through life insurance and superannuation funds (including net earnings on these funds) and the increase in assets with marketing boards. Household saving may also take the form of increases in holdings of cash and net purchases of securities, the net increase in bank deposits less advances, the reduction in the outstanding advances of instalment credit companies to households and the increase in the equity of households in dwellings and in capital equipment, buildings and stocks of unincorporated enterprises.

*Item 19. Surplus on general government current transactions.* The excess of income, including the whole of the net income of public trading enterprises, over current outlay. Current outlay includes final consumption expenditure, as defined in item 2, and transfer payments (interest, cash benefits, subsidies, grants for private capital purposes, and transfers overseas). The surplus is transferred to the general government capital account where it is shown as part of total funds available for financing capital accumulation.

*Item 20. General government grants for private capital purposes.* Grants to meet part of the costs of private capital expenditure, e.g. Commonwealth Home Savings grants, grants towards construction of science laboratories and libraries in private schools and of houses for aged persons, payments under the Currency Act in relation to the conversion of accounting and other machines following introduction of decimal currency; and compensation to primary industry marketing authorities for losses on overseas debts resulting from sterling devaluation.

*Item 21. Net lending.* The excess of net acquisition of financial assets by transactors over their incurrence of liabilities. The net lending to overseas is the balance on current transactions in the overseas transactions account. However, it should be noted that it differs from the balance on current account shown in the balance of payments statistics by the net amount of undistributed income accruing overseas. The concept of net lending to overseas includes additions to overseas monetary reserves.

*Item 22. Public enterprise income paid to general government.* Includes the whole of the income of public trading enterprises and that part of the income of public financial enterprises which is paid to general government whether described by the enterprises as dividends, transfer of profits or as income tax. *Public enterprise income* for trading enterprises (item 22a) is equal to net operating surplus, being exclusive of interest received and before charging interest costs relating to the enterprises. In principle interest receipts and payments of public corporate enterprises should be included in account 7 and only actual transfers to general government in account 10, but all interest costs and interest receipts of public trading enterprises are included with other interest transactions in the general government income and outlay account pending satisfactory identification of the interest relating to public trading enterprises. *Public enterprise income* for financial enterprises (items 22b plus 17) is the net income after depreciation allowances, interest paid and working expenses are deducted from receipts of interest and charges for services. Depreciation allowances deducted in arriving at the income of public trading and financial enterprises are those shown in their published accounts, except in the case of some trading enterprises whose accounts, included in the Commonwealth or State budgets, are analysed on the basis of their cash accounts (in which depreciation is not charged).

*Item 23. Cash benefits.* Current transfers to persons from general government in return for which no services are rendered or goods supplied. Principal components are scholarships; hospital, medical, pharmaceutical, maternity, sickness and unemployment benefits; child endowment; widows', age, invalid and repatriation pensions; and attendance money for waterside workers.

*Item 24. Other direct taxes, fees, fines, etc.* Estate and gift duties paid and all other taxes, fees for services of a regulatory character, fines and gifts paid by persons to general government.





## CHAPTER 17

### PRIVATE FINANCE

Further information on the subjects dealt with in this chapter is contained in the annual bulletins *Banking and Currency* (5.1) and *Insurance and Other Private Finance* (5.15). Current information is contained in the *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5) (monthly), and the following mimeographed statements: monthly—*Banking Statistics* (5.2); *Major Trading Banks Statistics* (preliminary statement) (5.3); *Savings Bank Statistics* (preliminary statement) (5.28); *Savings Banks Housing Finance Transactions within Australia* (preliminary statement) (5.35); *Life Insurance Statistics* (5.17); *Finance Companies* (5.14); *Instalment Credit for Retail Sales* (preliminary statement) (5.19); *Permanent Building Societies* (5.34); quarterly—*Instalment Credit for Retail Sales* (5.18); *New Capital Raisings by Companies in Australia* (bulletin (5.9) and preliminary statement (5.10)); *Capital and Maintenance Expenditure by Private Business in Australia* (5.8) (5.7); *Unit Trusts, Land Trusts and Mutual Funds* (5.31). Other relevant annual mimeographed bulletins are *Life Insurance* (5.32); *Australian Fire, Marine and General Insurance Statistics* (5.16); *Government Pension and Superannuation Schemes* (5.23); *Survey of Selected Private Pension Funds* (5.25); *Finance Companies* (5.13); and *Building Societies: Australia* (5.5).

### MONEY

#### Currency

Australia has a decimal system of currency, the unit being the dollar which is divided into 100 cents. Decimal coins and notes became legal tender on the 14 February 1966. Before that date the Australian currency unit was the pound divided into 20 shillings each of 12 pence. One dollar in the present currency is equal to 10 shillings in the old currency. The par value of the Australian dollar under the terms of the International Monetary Fund and established on the 14 February 1966, was 0.99531 grams of gold, which changed on the 23 December 1972 to 1.04360 grams of gold.

The *Reserve Bank Act* 1965 authorised the Reserve Bank of Australia to issue Australian notes in denominations of \$1, \$2, \$5, \$10, \$20, or \$50, or in any other denomination that the Treasurer, by instrument of writing published in the *Gazette*, determines. All Australia's coin requirements are met by the Royal Australian Mint, Canberra.

For additional information on note issue and coinage refer to List of Special Articles, etc., at end of this Year Book.

#### AUSTRALIAN NOTES IN CIRCULATION, JUNE 1968 TO 1972 (\$'000)

	<i>Last Wednesday in June</i>				
	1968	1969	1970	1971	1972
\$1 and 10s . . . .	34,881	37,528	40,400	42,218	43,552
\$2 and £1 . . . .	117,929	117,281	118,500	119,284	118,451
\$5 . . . . .	57,444	64,088	73,307	81,373	85,283
\$10 and £5 . . . .	401,079	441,276	474,004	521,061	560,268
\$20 and £10 . . . .	394,667	447,245	509,271	605,383	691,476
£20 . . . . .	1	1	1	..	..
£50 . . . . .	42	42	41	38	38
£100 . . . . .	40	40	37	31	31
<b>Total . . . .</b>	<b>1,006,083</b>	<b>1,107,500</b>	<b>1,215,561</b>	<b>1,369,388</b>	<b>1,499,099</b>
<b>Held by banks . . . .</b>	<b>159,726</b>	<b>164,867</b>	<b>165,202</b>	<b>177,706</b>	<b>182,648</b>
<b>Held by public . . . .</b>	<b>846,357</b>	<b>942,632</b>	<b>1,050,359</b>	<b>1,191,682</b>	<b>1,316,451</b>

**AUSTRALIAN DECIMAL COIN: COSTS OF COIN ISSUED, 1968-69 TO 1971-72**  
(\\$'000)

	<i>Cost of metal</i>	<i>Cost of minting</i>	<i>Freight and sundry charges</i>	<i>Total cost</i>	<i>Face value of coin issued</i>	<i>Surplus</i>
<b>Cupro-nickel—</b>						
1968-69 . . .	1,044	1,320	72	2,436	13,008	10,572
1969-70 . . .	1,226	1,297	68	2,591	19,412	16,821
1970-71 . . .	974	960	65	1,999	15,050	13,051
1971-72 . . .	721	698	77	1,496	10,758	9,262
<b>Bronze—</b>						
1968-69 . . .	511	745	24	1,280	2,296	1,016
1969-70 . . .	574	675	28	1,277	2,000	723
1970-71 . . .	703	675	36	1,414	2,068	654
1971-72 . . .	594	738	24	1,356	2,185	829
<b>Total—</b>						
1968-69 . . .	1,555	2,065	96	3,716	15,304	11,588
1969-70 . . .	1,800	1,972	96	3,868	21,412	17,544
1970-71 . . .	1,677	1,635	101	3,413	17,118	13,705
1971-72 . . .	1,315	1,436	101	2,852	12,943	10,091

**AUSTRALIAN DECIMAL COIN: VALUE OF COIN ISSUED**  
**30 JUNE 1968 TO 1972**  
(\\$'000)

<i>Year ended 30 June—</i>	<i>50 cents</i>	<i>20 cents</i>	<i>10 cents</i>	<i>5 cents</i>	<i>2 cents</i>	<i>1 cent</i>	<i>Total</i>
1968 . . . . .	1,671	11,206	6,099	2,938	1,118	705	23,737
1969 . . . . .	..	6,307	3,854	2,847	1,390	906	15,304
1970 . . . . .	9,038	5,053	3,074	2,247	1,121	879	21,412
1971 . . . . .	7,420	3,640	2,090	1,900	1,150	919	17,119
1972 . . . . .	4,418	3,360	1,740	1,240	1,370	815	12,943

**Gold receipts, issues and price**

Since early in the 1939-45 War all gold has been acquired by the Reserve Bank, and the export and use of gold has been subject to regulation by the Commonwealth Government. All trading banks in Australia, the Deputy Master of the branch of the Royal Mint in Perth, and three private refining companies are authorised under the Banking (Gold) Regulations to deal in gold on behalf of the Reserve Bank. The Melbourne Mint ceased to deal in gold in 1964. The Royal Australian Mint at Canberra is not authorised to receive and issue gold.

The average price of gold in Australia is fixed by the Reserve Bank and at present reflects the parity value of Australian currency established in conformity with the *International Monetary Agreements Act* 1947. The average price paid for gold delivered to the Reserve Bank of Australia or to persons authorised by the Bank to purchase gold is fixed by the Reserve Bank of Australia, and had been \$31.25 per fine ounce since 1 May 1954, changing to \$29.80 per fine ounce on 23 December 1972.

In December 1951 arrangements were made whereby producers could sell a proportion of newly-mined gold for industrial purposes on overseas premium markets. Under these arrangements gold is acquired by the Reserve Bank in the usual manner and sold, at the Bank's buying price, to an association representing gold producers participating in the scheme. The association pays the Bank's handling charges and the costs of preparation of the gold and makes arrangements for export and sale. Profits earned by the association after meeting administrative expenses are distributed to members in proportion to the quantity of gold delivered to the Reserve Bank. Until August 1952, when permission was given for the export of fine gold, gold exported under this arrangement was not to exceed a fineness of 22 carats (11/12ths).

The average price per fine ounce in Australian currency obtained for gold on premium markets in Australia and overseas for each month during the year 1971-72 was: July \$35.99, August \$37.38, September \$36.45, October \$36.72, November \$36.70, December \$37.26, January \$38.23, February \$40.61, March \$40.56, April \$41.10, May \$43.67 and June \$52.21.



## Overseas exchange rates

In the following table the "par of exchange" rate is the rate as at 30 June 1972 established under the International Monetary Fund Agreement. Selling rates shown are mainly the averages of daily quotations by the Commonwealth Trading Bank of Australia, and in other cases are the rates used by the Department of Customs and Excise in converting import values to Australian dollars for purposes of calculating customs duty.

## OVERSEAS EXCHANGE RATES: PAR OF EXCHANGE AND AVERAGE TELEGRAPHIC TRANSFER SELLING RATES FOR SYDNEY ON OVERSEAS COUNTRIES, 1971-72

Country	Basis of quotation	Australian decimal currency equivalents		Country	Basis of quotation	Australian decimal currency equivalents	
		Par of exchange	Selling rate 1971-72			Par of exchange	Selling rate 1971-72
America, United States of	Dollars to \$A1	1.216	1.1680	Japan	Yen to \$A1	374.528	368.29
Austria	Schillings to \$A1	28.3328	27.54	Netherlands	Guilders to \$A1	3.9456	3.385
Belgium	Francs to \$A1	54.4961	(a)52.49	New Zealand	\$A to \$NZ1	1.00	1.002
(financial)	Francs to \$A1	—	(a)52.58	Norway	Kroner to \$A1	8.0808	7.86
(convertible)	Francs to \$A1	—	(b)	Noumea	Francs to \$A1	(c)	108.12
Canada	Dollars to \$A1	(b)	1.1700	Pakistan	Rupees to \$A1	13.376	5.386
China, People's Rep. of	New Yuan to \$A1	(c)	2.69	Philippines	Pesos to \$A1	(b)	7.477
Denmark	Kroner to \$A1	8.4877	8.31	Singapore	Dollars to \$A1	3.4286	3.334
Fiji	\$A to \$F1	(b)	1.0397	South Africa, Republic of	Rands to \$A1	(b)	0.8518
France	Francs to \$A1	6.2207	(a)6.003	Spain	Pesetas to \$A1	78.4	77.78
(financial)	Francs to \$A1	—	(a)6.122	Sri Lanka (formerly Ceylon)	Rupees to \$A1	(d)	6.852
(commercial)	Francs to \$A1	—	(a)6.122	Sweden	Kronor to \$A1	5.825	5.706
Germany, Fed.	Deutsche Marks	3.9186	3.804	Switzerland	Francs to \$A1	(c)	4.567
Rep. of	to \$A1	36.48	34.54	Taiwan	Dollars to \$A1	48.64	47.66
Greece	Drachmae to \$A1	36.48	34.54	United Arab Republic	£E to \$A1	0.4235	0.5207
Hong Kong	Dollars to \$A1	(c)	6.67	United Kingdom	\$A to £stg1	(b)	2.1714
India	Rupees to \$A1	(b)	8.505	U.S.S.R.	Roubles to \$A1	(c)	0.989
Italy	Lire to \$A1	707.104	696				

(a) From 20 September 1971 two rates quoted for Belgium and France: "convertible" rate (Belgium), "commercial" rate (France) for trade transactions accompanied by documentation and "financial" rate for other transactions. (b) Exchange rate allowed to fluctuate, no par value fixed. (c) Not a member of the International Monetary Fund. (d) No par value established.

## Volume of money

The statistics of volume of money compiled by the Reserve Bank of Australia include notes and coin in the hands of the public, deposits of the public with trading banks and deposits with all savings banks. As far as possible, all components of this series in the table below have been calculated on a weekly average basis. Deposits of the public with trading banks comprise the actual weekly average of current and fixed deposits with trading banks less both the actual weekly average of Commonwealth and State Government current and fixed deposits and a weekly average of inter-bank current and fixed deposits. Inter-bank deposits mainly comprise savings bank deposits with trading banks and deposits of overseas banks with trading banks in Australia. Certificates of deposit include any holdings by Commonwealth and State Governments and banks. Deposits of the public with trading banks also include the actual weekly average of deposits of the public with the Reserve Bank of Australia. Deposits with all savings banks comprise an interpolated "weekly average" based on end-of-month figures of total deposits with all savings banks. The figures for the volume of money include details for Papua New Guinea and Australia's other external territories.

## VOLUME OF MONEY: AUSTRALIA, JUNE 1968 TO 1972

(Source: Reserve Bank of Australia)

(\$ million)

Average of weekly figures for June	Notes and coin in hands of public	Deposits of public with all trading banks(a)			Deposits with all savings banks(b)	Total volume of money
		Current	Fixed	Certificates of deposits		
1968	964	3,450	2,191	..	6,200	12,805
1969	1,065	3,685	2,404	138	6,682	13,974
1970	1,187	3,798	2,617	145	7,090	14,837
1971	1,336	3,976	2,864	56	7,618	15,851
1972	1,467	4,328	3,260	113	8,339	17,508

(a) Current and fixed deposits exclude Commonwealth and State Government and inter-bank deposits but include deposits of the public with the Reserve Bank; certificates of deposit include any holdings by Commonwealth and State Governments and banks. (b) Interpolated "Weekly average" based on end-of-month figures.

## BANKING

The Australian banking system has developed along the lines of the United Kingdom system with widespread branch banking conducted by relatively few banks.

### Development since federation

With federation in 1901 the new Commonwealth Parliament was given power, under Section 51 of the Commonwealth Constitution, to legislate with respect to 'Banking, other than State Banking, also State Banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money'. In 1911 the Commonwealth entered the field of banking with the establishment of the Commonwealth Bank of Australia, which conducted both trading bank and savings bank operations. A separate Commonwealth Savings Bank was established in 1928.

### Central bank

Central banking functions of the Commonwealth Bank developed gradually over the years prior to and during the second world war. In November 1935 a Royal Commission was appointed by the Commonwealth Government to inquire into the monetary and banking systems in operation in Australia and to report whether any, and if so what, alterations were desirable in the interests of the people of Australia as a whole, and the manner in which any such alterations should be effected. The Commission presented its report in July 1937, and a summary of the recommendations appears in Year Book No. 31, page 1010.

In 1945 the Commonwealth Government legislated to give full legal effect to the central banking functions already being exercised by the Commonwealth Bank of Australia and to regulate the banking system as a whole. The Commonwealth Bank of Australia further developed mainly as a central bank when from 3 December 1953 the Commonwealth Trading Bank of Australia was established to take over most of the general trading bank functions of the Commonwealth Bank of Australia.

Legislation in 1959 completed the separation of the trading and central banking functions of the Commonwealth Bank of Australia with the establishment of the Commonwealth Development Bank of Australia under the *Commonwealth Banks Act* 1959 to take over the Industrial Finance Department and Mortgage Bank Department of the Commonwealth Bank of Australia.

A new bank, the Reserve Bank of Australia, was established under the *Reserve Bank Act* 1959 as the nation's central bank to administer the provisions of a new banking Act (*Banking Act* 1959). A statutory corporation, the Commonwealth Banking Corporation, was set up under the *Commonwealth Banks Act* 1959 to control the Commonwealth Trading Bank of Australia, the Commonwealth Development Bank of Australia, and the Commonwealth Savings Bank of Australia.

### Trading banks

Commercial banking in Australia is carried on by fourteen trading banks. Six large private trading banks together with the Commonwealth Trading Bank are generally referred to as the major trading banks. These banks provide widespread banking facilities throughout Australia. The remaining seven banks comprise one small local bank, three overseas banks which have been represented in Australia for many years and three State-owned banks operating only within their respective States.

The major trading banks are as follows: Commonwealth Trading Bank of Australia, Australia and New Zealand Banking Group, The Bank of Adelaide, Bank of New South Wales, The Commercial Bank of Australia Ltd, The Commercial Banking Company of Sydney Ltd, and The National Bank of Australasia Ltd.

The other trading banks are: Bank of Queensland Ltd, Bank of China, Bank of New Zealand, Banque Nationale de Paris, The Rural Bank of New South Wales, State Bank of South Australia, and The Rural and Industries Bank of Western Australia (Rural Department).

### Term Loan Fund

Lending by trading banks is generally conducted on an overdraft basis. A departure from this practice followed discussions during 1961-62 involving the Commonwealth Government, the Reserve Bank and the major trading banks, which resulted in arrangements whereby the banks agreed to create a fund known as the Term Loan Fund, the resources of which would be employed to make loans for capital expenditure on production in the rural, industrial and (to a lesser extent) commercial fields and to finance exports. The loans would be made for fixed terms, varying usually between three and eight years. The term lending arrangements operated from April 1962.



### *Farm Development Loan Fund*

Discussions in March 1966 between the Commonwealth Government, the Reserve Bank and the major trading banks resulted in the establishment of a fund known as the Farm Development Loan Fund, from which resources would be available to provide rural producers, particularly smaller producers, with greater access to medium and long-term finance. The Fund was established in April 1966.

### **Savings banks**

Prior to 1956 savings banks operations were conducted by the Commonwealth Savings Bank, two trustee savings banks in Tasmania, and State-owned banks in Victoria, South Australia and Western Australia. In January 1956 private savings banks were established as subsidiary companies by two of the private trading banks. By mid-1962 all the major private trading banks had established savings bank subsidiary companies. In May 1972 the Bank of New Zealand Savings Bank Limited was granted an authority to carry on savings bank business in Australia.

### **Development banks**

The Commonwealth Development Bank of Australia was established by the *Commonwealth Banks Act* 1959 and commenced operations on 14 January 1960. The Australian Resources Development Bank was established by the major trading banks with the support of the Reserve Bank of Australia and commenced operations in February 1968. For further information on these banks *see* pages 512-13.

### **Current legislation**

Operations of banks and banking in Australia are currently governed by (i) Commonwealth legislation enacted in 1959 in respect of banking other than State banking, and (ii) State legislation relating to the incorporation of banks and management of State banks.

#### *Commonwealth banking legislation*

(a) The *Banking Act* 1959-1967 applies to all banks operating in Australia including the external Territories of the Commonwealth except State banks trading in their own State. The objects of the Act are: (i) to provide a legal framework uniform throughout Australia for regulating the banking system; (ii) to safeguard depositors of the banks from loss; (iii) to provide for the co-ordination of banking policy under the direction of the Reserve Bank; (iv) to control the volume of credit in circulation and bank interest rates; (v) to mobilise and to provide machinery for the control of the foreign exchange and gold resources of the Australian economy. A summary of the main provisions of the *Banking Act* 1959 is given in Year Book No. 46, pages 759-60.

(b) The *Reserve Bank Act* 1959-1966 provides for the constitution and management of the Reserve Bank of Australia and the management of the Australian note issue

(c) The *Commonwealth Banks Act* 1959-1968 provides for the constitution and management of the Commonwealth Banking Corporation, Commonwealth Trading Bank of Australia, Commonwealth Savings Bank of Australia, and Commonwealth Development Bank of Australia.

The Commonwealth Banking Corporation is the controlling body for the Commonwealth Trading Bank, Commonwealth Savings Bank and Commonwealth Development Bank. Under the *Banking Act* 1959-1967 the Corporation and its constituent banks are subject to the same central banking controls as are the private trading banks.

#### *State Banking legislation*

The State Acts under which the various banks are incorporated differ. While some of the older banks were incorporated by special Act or Charter, e.g. the Bank of New South Wales by Act of Council 1817, the Bank of Adelaide by Act of the South Australian Parliament, and the Bank of New Zealand by Act of the General Assembly of New Zealand, most of the banks are incorporated under a companies Act of the States or the United Kingdom. This is also the case with those banks which were reconstructed after the financial crisis of 1893. State banks, constituted under State Acts, transacting general banking business are The Rural Bank of New South Wales, the State Bank of South Australia, and the Rural and Industries Bank of Western Australia. State savings banks, constituted under State Acts, transacting savings bank business are The State Savings Bank of Victoria, The Savings Bank of South Australia and the Savings Bank Division of the Rural and Industries Bank of Western Australia.



## Reserve Bank of Australia

The Reserve Bank of Australia preserved and continued in existence the original corporate body known as the Commonwealth Bank of Australia under the new name Reserve Bank of Australia. An account of the progress and development of that bank is given in earlier issues of the Year Book (see No. 37, pages 570-2, and No. 45, pages 735-7).

The general functions of the Reserve Bank are set out in Section 10 of the *Reserve Bank Act* 1959-1966, which states:

'It is the duty of the Board, within the limits of its powers, to ensure that the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia and that the powers of the Bank under this Act, the *Banking Act* 1959, and regulations under that Act are exercised in such a manner as, in the opinion of the Board, will best contribute to,

(a) the stability of the currency of Australia; (b) the maintenance of full employment in Australia; and (c) the economic prosperity and welfare of the people of Australia.'

In addition to its functions as a central bank, the Bank controls the Australian note issue through a Note Issue Department, provides special banking facilities through the Rural Credits Department, and acts as banker to the Commonwealth and some of the States.

### Management

The policy of the Reserve Bank is determined by a Board consisting of the Governor (Chairman) the Deputy Governor, the Secretary to the Treasury, and seven other members appointed by the Governor-General. The Bank is managed by the Governor, who acts in accordance with the policy of the Board and with any directions of the Board. The Bank is required to inform the Government of the monetary and banking policy of the Board. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank.

### Central banking business

Under the *Commonwealth Bank Act* 1911-1943 and the war-time powers conferred by the National Security Regulations the Commonwealth Bank gradually assumed the functions of a Central Bank. Part III of the *Commonwealth Bank Act* 1945 formally constituted the Bank as a Central Bank and granted the necessary powers to carry on the business of a Central Bank, these powers being carried through into the present Act constituting the Reserve Bank. Under the provisions of the *Reserve Bank Act* 1959-1966 the capital for the Central Banking Business is the capital of the Commonwealth Bank for Central Banking purposes immediately prior to 14 January 1960, and such other sums as are transferred from the Reserve Bank Reserve Fund. The profits of the Bank are distributed as follows: (a) such sums as the Treasurer, after consultation with the Bank, determines shall be placed to the credit of the Reserve Bank Reserve Fund and (b) the remainder shall be paid to the Commonwealth.

### Note Issue Department

The Note Issue Department, established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank, was maintained in the same form under the *Reserve Bank Act* 1959. The Reserve Bank may, through this Department, issue, re-issue and cancel Australian notes. Under the *Reserve Bank Act* 1959-1966 the profits of the Note Issue Department are paid to the Commonwealth.

### Rural Credits Department

The Rural Credits Department, established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce, was continued in the same form under the *Reserve Bank Act* 1959. The Reserve Bank may, through this Department, make advances upon the security of primary produce placed under the legal control of the Bank, or other security associated with the production or marketing of primary produce, to co-operative associations or marketing boards formed under the laws of the Commonwealth or a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance shall not exceed one year. Under the provisions of the *Reserve Bank Act* 1959-1966 the capital of the Rural Credits Department is the capital of the Rural Credits Department of the Commonwealth Bank immediately prior to 14 January 1960, and \$4,000,000 provided by the Reserve Bank. The profits of the Rural Credits Department are dealt with as follows: (a) one-half to the credit of the Rural Credits Department Reserve Fund and (b) one-half to the credit of the Rural Credits Development Fund.

## RESERVE BANK OF AUSTRALIA: LIABILITIES, 30 JUNE 1968 TO 1972

(\$ million)

30 June—	Capital and reserve funds	Development fund	Special reserve— I.M.F. special drawing rights	Australian notes on issue	Deposits of trading banks Statutory reserve deposit accounts	Other	Deposits of savings banks	Other deposits, bills payable and other liabilities	Total
<b>CENTRAL BANKING BUSINESS</b>									
1968 .	60.1	..	..	..	456.4	117.9	495.8	327.6	1,457.8
1969 .	63.0	..	..	..	565.6	60.4	535.2	658.0	1,882.1
1970 .	66.7	..	75.0	..	674.5	39.5	613.2	672.2	2,141.2
1971 .	70.7	..	138.6	..	617.5	62.8	615.5	1,098.9	2,603.9
1972 .	65.6	..	201.6	..	554.2	88.9	802.9	2,094.9	3,808.1
<b>NOTE ISSUE DEPARTMENT</b>									
1968 .	..	..	..	998.5	..	..	..	20.3	1,018.8
1969 .	..	..	..	1,091.5	..	..	..	45.9	1,137.4
1970 .	..	..	..	1,195.8	..	..	..	62.5	1,258.3
1971 .	..	..	..	1,369.4	..	..	..	74.2	1,443.6
1972 .	..	..	..	1,508.2	..	..	..	59.2	1,567.4
<b>RURAL CREDITS DEPARTMENT</b>									
1968 .	16.7	0.8	..	..	..	..	..	212.0	229.6
1969 .	17.6	0.9	..	..	..	..	..	461.8	480.3
1970 .	18.5	1.1	..	..	..	..	..	338.5	358.1
1971 .	19.3	1.1	..	..	..	..	..	288.3	308.7
1972 .	20.0	1.1	..	..	..	..	..	239.7	260.8
<b>TOTAL</b>									
1968 .	76.9	0.8	..	998.5	456.4	117.9	495.8	(a)315.9	(a)2,462.2
1969 .	80.6	0.9	..	1,091.5	565.6	60.4	535.2	(a)420.8	(a)2,754.9
1970 .	85.2	1.1	75.0	1,195.8	674.5	39.5	613.2	(a)478.7	(a)3,162.9
1971 .	90.0	1.1	138.6	1,369.4	617.5	62.8	615.5	(a)765.8	(a)3,660.6
1972 .	85.6	1.1	201.6	1,508.2	554.2	88.9	802.9	(a)1,361.6	(a)4,604.1

(a) Inter-departmental accounts have been offset.

## RESERVE BANK OF AUSTRALIA: ASSETS, 30 JUNE 1968 TO 1972

(\$ million)

30 June—	Gold and balances held abroad (a)	Other overseas securities	Australian notes, coin	Australian Government securities (b)	Cheques and bills of other banks	Loans, advances, bills discounted, all other assets (c)	Bank premises (d)	Bills receivable and remittances in transit	Total
<b>CENTRAL BANKING BUSINESS</b>									
1968 .	349.3	182.0	9.5	536.2	8.0	263.7	33.8	75.3	1,457.8
1969 .	589.1	231.6	8.4	386.0	10.8	570.1	35.0	51.1	1,882.1
1970 .	758.8	201.5	12.6	573.9	8.0	469.0	36.3	81.1	2,141.2
1971 .	1,285.0	285.0	11.4	453.1	3.4	392.7	37.9	135.4	2,603.9
1972 .	2,680.5	376.2	12.3	299.2	4.7	297.2	41.6	96.3	3,808.1
<b>NOTE ISSUE DEPARTMENT</b>									
1968 .	315.5	151.4	..	501.0	..	(e)50.8	0.2	..	1,018.8
1969 .	164.5	198.5	..	457.3	..	(e)316.8	0.3	..	1,137.4
1970 .	189.9	168.0	..	606.1	..	(e)294.0	0.4	..	1,258.3
1971 .	289.0	257.1	..	447.7	..	(e)449.2	0.6	..	1,443.6
1972 .	296.6	234.7	..	199.5	..	(e)834.7	1.8	..	1,567.4
<b>RURAL CREDITS DEPARTMENT</b>									
1968 .	..	..	..	..	..	229.6	..	..	229.6
1969 .	..	..	..	..	..	480.3	..	..	480.3
1970 .	..	..	..	..	..	358.1	..	..	358.1
1971 .	..	..	..	..	..	308.7	..	..	308.7
1972 .	..	..	..	..	..	260.8	..	..	260.8
<b>TOTAL (f)</b>									
1968 .	664.8	333.5	9.5	1,037.2	8.0	300.1	34.0	75.3	2,462.2
1969 .	753.5	430.1	8.4	843.3	10.8	622.4	35.3	51.1	2,754.9
1970 .	948.7	369.5	12.6	1,180.0	8.0	526.4	36.7	81.1	3,162.9
1971 .	1,574.0	542.1	11.4	900.7	3.4	455.1	38.6	135.4	3,660.6
1972 .	2,977.1	610.9	12.3	498.8	4.7	360.5	43.5	96.3	4,604.1

(a) Includes currency at short call and International Monetary Fund drawing rights. (b) Includes Treasury bills and Treasury notes. (c) After deducting provision for debts considered bad or doubtful. (d) At cost, less amounts written off. (e) Includes interest-bearing deposit account established with the Central Bank. (f) Inter-departmental accounts have been offset.

**RESERVE BANK OF AUSTRALIA: NET PROFITS, 1967-68 TO 1971-72**  
 (\$ million)

	Central Banking Business	Note Issue Department	Rural Credits Department	Total	Distributed to—			
					Common- wealth of Australia	Reserve Bank Reserve fund	Rural Credits Department	
							Reserve fund	Develop- ment fund
1967-68 .	4.4	23.0	1.5	29.0	26.2	1.3	0.7	0.7
1968-69 .	5.7	23.8	1.6	31.1	26.6	2.9	0.8	0.8
1969-70 .	8.9	36.3	1.9	47.1	41.6	3.6	0.9	0.9
1970-71 .	11.3	46.9	1.6	59.8	54.2	4.0	0.8	0.8
1971-72 .	4.9	25.2	1.5	31.6	25.2	4.9	0.7	0.7

### Trading banks

Balance sheet information contained in the table on page 503 and profit and loss account information contained in the table at the top of page 504 for the years 1968 to 1972 does not relate to uniform accounting periods but rather to the financial years of the banks which ended in the years shown. For balance dates of individual banks see annual bulletin *Banking and Currency* (5.1).

Figures shown for averages of liabilities and assets in the table on page 504 are the average of liabilities and assets within Australia (including Papua New Guinea and other External Territories) of the banks on the weekly balance days (Wednesdays) during the period concerned. In the table on page 505 figures shown for debits to customers' accounts are the average of debits for the weeks ending on the weekly balance days (Wednesdays) during the period concerned. In the table on page 506 figures shown for new and increased lending commitments are the averages of weekly commitments for the six months ending on the second Wednesday of the last month in the period under review.

In the classification of bank advances, borrowers are classified into two main groups.

*Resident borrowers* comprising all institutions (including branches of overseas institutions) engaged in business in Australia and individuals permanently residing in Australia, and

*Non-resident borrowers* comprising all other persons and institutions, including companies incorporated abroad, which, although represented, do not carry on business in Australia.

Advances to resident borrowers are classified into.

*Business advances* which are advances to partnerships, companies and other institutions engaged in business in Australia, advances to individuals actively engaged in business or a profession on their own behalf if the advances are mainly for purposes of that business or profession, and advances to mutual, co-operative and benefit societies which distribute their profits to members by way of dividends, rebates of charges for goods and services, or increased benefits.

Separate figures are shown for business advances to companies and to other (unincorporated) businesses and advances are also classified to the main industry of borrower.

*Advances to public authorities* which are advances to local and semi-government authorities including separately constituted government business undertakings but not Commonwealth and State governments.

*Personal advances* which are advances to individuals for purposes other than carrying on a business or profession.

*Advances to non-profit organisations* which are advances to organisations which are not operated for the purpose of making a profit or gain to individual members, but for the purposes of the organisations or for the benefit of the community in general.

The classification used for overdraft limits is the same as that used for the classification of bank advances (see above) while abridged versions of this classification are used for bank deposits and new and increased lending commitments.



## Interest rates

At 30 June 1972 the maximum rate of interest paid by trading banks for the following terms were: (i) on fixed deposits of less than \$50,000, 3 months and less than 12 months—4.30 per cent, 12 months and less than 2 years—4.50 per cent, 2 years and less than 4 years—5.00 per cent, 4 years—5.50 per cent; (ii) on fixed deposits of \$50,000 and over, 30 days to 4 years—6.50 per cent; (iii) on certificates of deposit (\$50,000 and over), 3 months to 24 months—6.50 per cent. The maximum rate of interest charged on overdrafts was 7.75 per cent and the maximum flat rate on unsecured personal loans was 6.25 per cent.

## Branches and agencies

At 30 June 1972 the major trading banks operated 4,485 branches, and the other trading banks 290 branches. Of the total of 4,775 branches, 2,349 were located in 'metropolitan areas'. Trading bank facilities were also available at 1,397 agencies throughout Australia at 30 June 1972.

## Liabilities and assets

## TRADING BANKS(a): LIABILITIES AND ASSETS(b), 1968 TO 1972

(\$ million)

## LIABILITIES

	<i>Paid-up capital</i>	<i>Reserve funds (used in business of bank)</i>	<i>Final dividend proposed</i>	<i>Balance of profit and loss account</i>	<i>Total share-holders' funds or total capital and reserve funds</i>	<i>Balances due to other banks</i>	<i>Deposits, bills payable and other liabilities(c)</i>	<i>Total</i>
1968 . .	245.6	217.8	10.4	15.6	489.4	229.6	8,001.1	8,720.1
1969 . .	269.9	245.7	8.7	22.0	546.1	335.9	8,671.6	9,553.6
1970 . .	358.6	253.7	12.6	27.3	652.1	460.5	9,295.3	10,407.9
1971 . .	326.7	273.4	13.3	30.4	643.7	690.8	10,009.0	11,343.6
1972 . .	341.5	313.2	16.0	33.5	704.1	801.1	11,981.7	13,487.0

## ASSETS

		Australian public securities							Loans to authorised dealers in short-term money market
		Coin, bullion, notes and cash at Reserve Bank	Money at short call overseas	Commonwealth Government		Local and semi- government authorities	Other public securities	Other securities	
				Treasury bills and notes	Other securities				
1968 .	.	206.6	33.0	67.7	1,230.1	37.2	45.0	115.9	121.0
1969 .	.	250.3	57.4	77.8	1,344.8	38.9	51.9	149.5	158.2
1970 .	.	252.6	49.6	92.7	1,244.3	47.3	39.3	229.4	132.2
1971 .	.	220.0	49.7	106.5	1,427.1	50.8	71.6	273.4	155.6
1972 .	.	208.3	58.8	258.9	2,100.7	60.1	172.0	310.4	297.9

	<i>Statutory reserve deposit account with Reserve Bank</i>	<i>Cheques and bills of, and balances with and due from other banks</i>	<i>Loans(d), advances and bills discounted</i>	<i>Bank premises, furniture and sites</i>	<i>Bills receivable and remittances in transit</i>	<i>All other assets</i>	<i>Total</i>
1968 . .	454.6	456.4	4,515.2	165.9	1,174.1	97.4	8,720.1
1969 . .	582.7	420.7	5,004.3	185.3	1,137.4	94.4	9,553.6
1970 . .	632.0	400.4	5,707.6	199.2	1,181.7	199.7	10,407.9
1971 . .	611.6	511.3	6,179.8	178.5	1,271.8	235.9	11,343.6
1972 . .	566.4	753.2	6,866.8	199.7	1,378.8	255.0	13,487.0

(a) Excludes the overseas banks but includes the deposits and assets held against those deposits of the Savings Bank Division of the Rural and Industries Bank of Western Australia. (b) This table relates to liabilities and assets both inside and outside Australia. (c) Includes provisions for contingencies. (d) Other than loans to authorised dealers in the short-term money market.

**TRADING BANKS(a): PROFIT AND LOSS, APPROPRIATION OF PROFITS(b)**  
**1968 TO 1972**  
(\$ million)

	Profit and loss			Profits appropriated to—				
	Net earnings (c)	Expenses (d)	Income, land and other taxes and payments in lieu of taxes	Net profit	Reserve funds (e)	Writing-off bank premises	Other appropriations	Dividends paid and proposed
1968 . . .	365.3	286.9	37.6	40.9	16.7	2.5	1.7	18.7
1969 . . .	422.2	335.5	41.5	45.2	13.4	1.4	2.5	21.6
1970 . . .	478.9	378.9	43.8	56.3	15.8	1.0	3.1	31.1
1971 . . .	525.6	443.0	36.2	46.3	12.6	1.0	3.9	25.8
1972 . . .	586.8	489.8	42.7	54.3	17.0	1.1	3.9	28.8

(a) Excludes the overseas banks. (b) Includes profit and loss on account of the Savings Bank Division of the Rural and Industries Bank of Western Australia. (c) Discount and interest earned, net exchange, commissions and other items (including transfers from contingencies accounts) after deducting interest paid and accrued on deposits, rebate on bills current at balance date, amounts written off assets and losses on realisation of assets, and transfers to the credit of contingencies accounts (out of which accounts provision for all bad and doubtful debts has been made). (d) Includes directors' fees. (e) Excludes accumulated profits and profit and loss accounts.

**ALL TRADING BANKS: AVERAGE LIABILITIES AND ASSETS(a) WITHIN AUSTRALIA(b)**  
**JUNE 1968 TO 1972**  
(\$ million)

**LIABILITIES(c)**

Deposits repayable in Australia					Balances due to other banks	Bills payable and all other liabilities to the public	Total
Current							
June	Fixed	Bearing interest	Not bearing interest	Total			
1968	2,472.9	448.6	3,165.5	6,086.9	54.2	284.5	6,425.6
1969	2,850.5	467.9	3,387.2	6,705.6	111.5	322.2	7,139.3
1970	3,097.2	462.9	3,538.9	7,098.9	257.7	439.4	7,796.0
1971	3,176.5	551.2	3,703.5	7,431.2	320.8	526.0	8,278.0
1972	3,742.1	538.0	4,042.0	8,322.1	372.0	559.3	9,253.4

**ASSETS(d)**

June	Coin, bullion, notes and cash at Reserve Bank	Commonwealth Government securities		Local and semi-government securities	Loans to authorised dealers in short-term money market	Statutory reserve deposit account with Reserve Bank	Loans(e), advances and bills discounted	All other assets	Total
		Treasury bills and notes	Other securities						
1968 . . . . .	161.4	27.5	1,188.5	20.6	87.7	457.8	4,019.8	580.3	6,543.6
1969 . . . . .	158.5	52.9	1,389.6	20.3	94.9	567.6	4,383.6	615.0	7,282.4
1970 . . . . .	171.9	54.3	1,275.2	23.7	102.8	678.7	4,902.6	751.3	7,960.5
1971 . . . . .	182.0	110.8	1,339.5	25.5	142.0	619.8	5,316.8	863.4	8,600.0
1972 . . . . .	190.1	116.7	1,702.9	29.2	249.8	558.2	5,875.7	921.2	9,643.7

(a) Figures shown for average of liabilities and assets are the average of liabilities and assets within Australia of the banks at the close of business on the weekly balance days (usually Wednesdays) during the period concerned. (b) Includes Papua New Guinea and other External Territories. (c) Excludes shareholders' funds, inter-branch accounts and contingencies. (d) Excludes inter-branch accounts and contingencies. (e) Excludes loans to authorised dealers in the short-term money market.

**TRADING BANKS: AVERAGE WEEKLY DEBITS TO CUSTOMERS'  
ACCOUNTS(a), STATES AND TERRITORIES, 1967-68 TO 1971-72**  
(\$ million)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1967-68	1,257.9	1,041.8	289.2	201.7	169.1	51.3	5.8	21.2	3,038.0
1968-69	1,526.0	1,214.1	325.3	224.2	209.0	55.9	7.4	50.4	3,612.6
1969-70	1,865.6	1,413.3	364.7	243.2	246.4	61.2	12.7	87.7	4,294.9
1970-71	2,148.6	1,647.3	405.0	269.6	295.3	64.2	15.8	64.6	4,910.4
1971-72	2,363.0	1,808.7	459.1	293.1	318.4	70.0	18.7	41.8	5,372.8

(a) Covers all trading banks and in addition the Rural Credit Department of the Reserve Bank and the Commonwealth Development Bank. Excludes debits to Commonwealth and State Government accounts in capital cities.

**Major Trading Banks: classification of bank advances, deposits, new and increased lending commitments and overdraft limits**

For an explanation of items in the following table *see* notes on page 502.

**CLASSIFICATION OF TOTAL ADVANCES WITHIN AUSTRALIA(a)  
JULY 1971 TO JANUARY 1973**

<i>At second Wednesday of—</i>									
	<i>July 1971</i>		<i>January 1972</i>		<i>July 1972</i>		<i>January 1973</i>		
	<i>Amount (\$m)</i>	<i>Per cent</i>	<i>Amount (\$m)</i>	<i>Per cent</i>	<i>Amount (\$m)</i>	<i>Per cent</i>	<i>Amount (\$m)</i>	<i>Per cent</i>	
<i>Resident borrowers—</i>									
<i>Business advances—</i>									
Agriculture, grazing and dairying	993.9	20.5	933.9	18.9	962.5	17.9	919.0	15.9	
Manufacturing	843.5	17.4	800.1	16.2	879.2	16.3	817.5	14.2	
Transport, storage and communication	90.1	1.9	90.2	1.8	94.5	1.8	102.5	1.8	
<i>Finance—</i>									
Building and housing societies	42.4	0.9	42.0	0.9	44.3	0.8	42.9	0.7	
Other	192.7	4.0	291.2	5.9	266.6	5.0	310.8	5.5	
Total finance	235.2	4.9	333.1	6.8	311.0	5.8	353.6	6.1	
<i>Commerce—</i>									
Retail trade	331.7	6.9	304.4	6.2	363.0	6.7	353.2	6.1	
Wholesale trade(b)	366.1	7.6	333.6	6.8	360.9	6.7	459.5	8.0	
Total commerce	697.8	14.4	638.0	12.9	723.9	13.4	812.7	14.1	
Building and construction	152.1	3.1	140.0	2.8	167.3	3.1	191.8	3.3	
Other businesses	817.1	16.9	898.1	18.2	1,007.2	18.7	1,063.3	18.4	
Unclassified	51.2	1.1	58.9	1.2	59.3	1.1	82.1	1.4	
Total business advances	3,880.8	80.2	3,892.3	79.0	4,204.9	78.1	4,342.4	75.2	
of which—									
Companies	2,437.2	50.4	2,495.3	50.6	2,696.2	50.1	2,801.5	48.5	
Other	1,443.6	29.8	1,397.0	28.2	1,508.6	28.0	1,540.9	26.7	
Advances to public authorities(c)	62.3	1.3	132.5	2.7	68.1	1.3	82.9	1.4	
Personal advances classified according to main purpose of advance—									
Building or purchasing own home (individuals)	294.8	6.1	296.5	6.0	340.7	6.3	391.2	6.8	
Other (including personal loans)	527.5	10.9	535.3	10.9	691.9	12.9	868.9	15.1	
Total personal	822.3	17.0	831.8	16.9	1,032.6	19.2	1,260.1	21.8	
Advances to non-profit organisations	69.3	1.4	69.6	1.4	72.1	1.3	82.7	1.4	
Total advances to resident borrowers	4,834.7	99.9	4,926.2	99.9	5,377.7	99.9	5,768.2	99.9	
Advances to non-resident borrowers	4.2	0.1	5.9	0.1	6.8	0.1	7.1	0.1	
Total all advances	4,839.0	100.0	4,932.1	100.0	5,384.5	100.0	5,775.3	100.0	

(a) Includes Papua New Guinea and semi-government bodies.

(b) Includes temporary advances to woolbuyers.

(c) Includes local government



**MAJOR TRADING BANKS: CLASSIFICATION OF DEPOSITS(a) WITHIN AUSTRALIA(b)**  
**JULY 1971 TO JANUARY 1973**

<i>At second Wednesday of—</i>								
<i>July 1971</i>		<i>January 1972</i>		<i>July 1972</i>		<i>January 1973</i>		
<i>Amount</i>	<i>Per</i>	<i>Amount</i>	<i>Per</i>	<i>Amount</i>	<i>Per</i>	<i>Amount</i>	<i>Per</i>	
<i>(\$m)</i>	<i>cent</i>	<i>(\$m)</i>	<i>cent</i>	<i>(\$m)</i>	<i>cent</i>	<i>(\$m)</i>	<i>cent</i>	
<i>Resident depositors—</i>								
<i>Business deposits—</i>								
Agriculture, grazing and dairying . . . . .	729.1	11.3	813.7	11.2	792.8	10.9	1,000.8	11.2
Manufacturing . . . . .	314.7	4.9	415.6	5.7	363.6	4.9	540.7	6.0
Transport, storage and communication . . . . .	96.8	1.5	104.5	1.5	100.9	1.3	122.8	1.4
Finance . . . . .	425.9	6.6	487.7	6.7	552.1	7.5	832.6	9.3
Commerce . . . . .	458.0	7.1	556.4	7.7	476.5	6.5	690.3	7.7
Building and construction . . . . .	205.0	3.2	237.8	3.3	223.4	3.0	259.3	2.9
Other businesses . . . . .	928.7	14.5	992.0	13.7	1,081.6	14.7	1,309.6	14.6
Unclassified . . . . .	100.1	1.6	101.0	1.4	114.1	1.5	125.0	1.4
<i>Total business deposits</i>	<i>3,258.4</i>	<i>50.7</i>	<i>3,708.7</i>	<i>51.2</i>	<i>3,705.0</i>	<i>50.6</i>	<i>4,881.0</i>	<i>54.5</i>
of which—								
Companies . . . . .	1,514.7	23.6	1,794.4	24.8	1,753.6	24.0	2,496.7	27.9
Other . . . . .	1,743.7	27.1	1,914.3	26.4	1,951.3	26.7	2,384.3	26.6
Deposits of public authorities . . . . .	405.6	6.3	494.7	6.8	552.3	7.6	731.4	8.2
Personal deposits . . . . .	2,340.8	36.4	2,587.8	35.7	2,565.7	35.1	2,811.8	31.4
Deposits of non-profit organisations . . . . .	318.4	5.0	333.6	4.6	361.7	4.9	358.4	4.0
<i>Total resident depositors</i>	<i>6,323.2</i>	<i>98.4</i>	<i>7,124.9</i>	<i>98.3</i>	<i>7,184.8</i>	<i>98.2</i>	<i>8,782.5</i>	<i>98.0</i>
<i>Total non-resident depositors</i>	<i>102.9</i>	<i>1.6</i>	<i>123.0</i>	<i>1.7</i>	<i>132.8</i>	<i>1.8</i>	<i>178.1</i>	<i>2.0</i>
<i>Total all depositors</i>	<i>6,426.1</i>	<i>100.0</i>	<i>7,247.8</i>	<i>100.0</i>	<i>7,317.5</i>	<i>100.0</i>	<i>8,960.6</i>	<i>100.0</i>

(a) Excludes deposits of Commonwealth and State Governments.

(b) Includes Papua New Guinea.

**MAJOR TRADING BANKS: NEW AND INCREASED LENDING COMMITMENTS  
TO SELECTED INDUSTRIAL GROUPS(a), JULY 1971 TO JANUARY 1973**

(Source: Reserve Bank of Australia)

(\$ million)

Six months ended second Wednesday of—								
July 1971			January 1972		July 1972		January 1973	
	Aggregate	Term loan component	Aggregate	Term loan component	Aggregate	Term loan component	Aggregate	Term loan component
Business—								
Agriculture, grazing and dairying . . . . .	(b)108.7	10.7	(b)95.8	11.7	(b)188.3	18.4	(b)243.9	28.3
Manufacturing . . . . .	137.8	40.7	201.2	40.1	315.4	54.2	264.1	49.6
Finance . . . . .	60.5	0.5	29.8	1.0	109.8	1.2	135.8	1.3
Commerce(a) . . . . .	139.6	16.3	161.0	9.1	219.5	6.2	291.0	6.6
Building and construction . . . . .	47.2	3.4	44.7	1.6	121.8	6.8	140.2	3.7
Persons—								
Advances for building or purchase of own home (to individuals) . . . . .	97.2	..	105.6	..	204.2	..	257.3	..
Other (including personal loans) . . . . .	176.1	..	190.2	..	348.9	..	443.4	..
All other . . . . .	257.9	46.5	324.1	71.5	423.7	42.0	538.7	35.0
Total . . . . .	(b)1,025.0	118.0	(b)1,152.5	134.8	(b)1,931.5	128.8	(b)2,314.5	124.5

(a) Excludes commitments in respect of temporary advances to woolbuyers. (b) Includes Farm Development Loan approvals: July 1971, \$15.8 million; January 1972, \$11.6 million; July 1972, \$37.0 million and January 1973 \$55.1 million.

**MAJOR TRADING BANKS: CLASSIFICATION OF OVERDRAFT LIMITS  
OUTSTANDING(a), JULY 1971 TO JANUARY 1973**

(Source: Reserve Bank of Australia)

(\$ million)

	<i>Second Wednesday of—</i>			
	<i>July 1971</i>	<i>January 1972</i>	<i>July 1972</i>	<i>January 1973</i>
<i>Resident borrowers—</i>				
Business overdraft limits—				
Agriculture, grazing and dairying—				
Mainly sheep grazing . . . . .	381.7	352.7	348.9	341.3
Mainly wheat growing . . . . .	122.8	118.0	115.9	118.0
Mainly dairying and pig raising . . . . .	103.8	92.7	96.8	101.1
Other . . . . .	313.3	311.0	337.9	363.9
Total agriculture, etc. . . . .	921.5	874.3	899.5	924.2
Manufacturing . . . . .	1,256.7	1,329.7	1,500.0	1,539.9
Transport, storage and communication . . . . .	107.5	119.8	118.6	134.0
Finance—				
Building and housing societies . . . . .	67.7	64.3	84.8	83.3
Pastoral finance companies . . . . .	147.2	146.3	122.7	124.1
Hire purchase and other finance companies . . . . .	95.0	102.2	117.8	161.4
Other . . . . .	99.2	105.7	154.5	178.8
Total finance . . . . .	409.0	418.4	479.8	547.5
Commerce(a)—				
Retail trade . . . . .	485.6	493.1	540.1	568.2
Wholesale trade . . . . .	399.6	413.9	441.9	518.3
Total commerce(a) . . . . .	885.2	907.0	982.0	1,086.6
Building and construction . . . . .	196.1	195.9	257.9	317.6
Other businesses—				
Mining . . . . .	212.2	289.2	277.5	311.7
Other . . . . .	593.3	589.3	730.5	925.8
Total other business . . . . .	805.5	878.5	1,007.9	1,237.4
Unclassified . . . . .	52.8	47.4	70.5	78.4
Total business overdraft limits . . . . .	4,634.4	4,771.1	5,316.2	5,865.5
Overdraft limits of public authorities . . . . .	236.0	267.7	279.4	273.0
Personal overdraft limits—				
Building or purchasing own home . . . . .	347.5	352.8	421.8	495.2
Other . . . . .	641.7	703.3	851.5	1,104.8
Total personal overdraft limits . . . . .	989.1	1,056.1	1,273.3	1,599.9
Overdraft limits of non-profit organisations . . . . .	119.9	121.5	146.0	147.2
Total overdraft limits of resident borrowers . . . . .	5,979.4	6,216.3	7,014.8	7,885.6
Overdraft limits of non-resident borrowers . . . . .	4.7	5.5	8.7	9.5
Total all overdraft limits . . . . .	5,984.1	6,221.8	7,023.6	7,895.1

(a) Excludes limits in respect of temporary advances to woolbuyers, term loans and farm development loans.

**MAJOR TRADING BANKS: ADVANCES(a), BY RATE OF INTEREST  
JUNE 1971 TO DECEMBER 1972**

(Source: Reserve Bank of Australia)

(Proportion at each rate to total—per cent)

Interest rate per annum	End of—			
	June 1971	December 1971	June 1972	December 1972
5 per cent and less . . . . .	3.7	4.9	5.4	7.9
More than 5 per cent but less than 5½ per cent . . . . .	0.6	0.7	0.9	0.7
5½ per cent . . . . .	..	0.5	0.2	0.3
More than 5½ per cent but less than 6 per cent . . . . .	0.1	0.8	0.4	0.3
6 per cent . . . . .	0.1	1.3	0.3	0.8
More than 6 per cent but less than 6½ per cent . . . . .	2.1	2.7	2.8	2.4
6½ per cent . . . . .	1.4	2.3	6.0	7.0
More than 6½ per cent but less than 7 per cent . . . . .	5.0	5.1	4.8	4.4
7 per cent . . . . .	9.3	8.5	5.5	4.9
More than 7 per cent but less than 7½ per cent . . . . .	7.7	7.2	12.0	9.4
7½ per cent . . . . .	8.5	8.1	8.7	7.0
More than 7½ per cent but less than 8 per cent . . . . .	13.1	11.7	45.4	44.9
8 per cent . . . . .	6.7	6.3	0.9	1.1
More than 8 per cent and up to 8½ per cent . . . . .	37.2	35.2	1.1	1.6
More than 8½ per cent . . . . .	4.4	4.8	5.8	7.3
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Excludes term loans, farm development loans and personal instalment loans. Comprises categories of loans specifically exempted from the prescribed maximum overdraft requirement such as, short-term mortgage and bridging loans and post-shipment wool advances subject to a disincentive rate of interest. The maximum rate chargeable on overdraft advances was fixed on 4 February 1972 at 7½ per cent on amounts of under \$50,000. For larger amounts, actual rates are a matter for negotiation between banks and their customers.

**MAJOR TRADING BANKS: FIXED DEPOSITS(a), BY RATE OF INTEREST  
JUNE 1971 TO DECEMBER 1972**

(Source: Reserve Bank of Australia)

(Proportion at each rate to total—per cent)

Interest rate per annum	End of—			
	June 1971	December 1971	June 1972	December 1972
More than 4 per cent but less than 4½ per cent . . . . .	..	..	..	4.1
4½ per cent and less than 4¾ per cent . . . . .	..	..	10.1	18.6
4¾ per cent and less than 5 per cent . . . . .	0.1	..	11.8	17.1
5 per cent and less than 5½ per cent . . . . .	1.9	..	7.4	4.6
5½ per cent and less than 5¾ per cent . . . . .	37.4	28.4	19.9	14.8
5¾ per cent and less than 6 per cent . . . . .	19.8	19.2	17.4	9.3
6 per cent and less than 6½ per cent . . . . .	28.0	29.9	8.7	9.4
6½ per cent and less than 6¾ per cent . . . . .	..	0.1	0.4	2.2
6¾ per cent and less than 7 per cent . . . . .	1.8	3.4	3.7	3.6
7 per cent . . . . .	..	..	..	1.3
7½ per cent . . . . .	11.0	18.9	20.5	15.2
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Excludes Commonwealth and State Government fixed deposits.



## Savings banks

For information on the origin of savings banks in Australia, see Year Book No. 50, page 854, and earlier issues.

All savings banks, including trustee savings banks, but not State savings banks, are subject to the *Banking Act* 1959-1967. Details of this Act and the special provisions applying to savings banks are given in Year Book No. 46, pages 759-60.

In the tables on pages 509-10 balance sheet and profit and loss account information for the years 1968 to 1972 does not relate to a uniform accounting period but rather to the financial years of the banks which ended in the years shown. For balance dates of individual savings banks see annual bulletin *Banking and Currency* (5.1).

The number of operative accounts excludes school bank accounts and small inoperative accounts. The other sections of the tables relating to depositors' balances, etc., include school bank accounts, small inoperative accounts, investment accounts, deposit stock and non-interest bearing cheque accounts at the State Savings Bank of Victoria and the Savings Bank of South Australia, and fixed deposit accounts and non-interest bearing cheque accounts at the trustee savings banks in Tasmania.

At 30 June 1972 all savings banks were paying interest on deposits at rates of up to 5.00 per cent. For accounts other than friendly and other societies the maximum interest bearing amount in any one account was \$20,000. There is no limit on the maximum interest bearing amount for society cheque accounts. Interest rates charged on loans made by the savings banks were: housing loans—up to 7.00 per cent; other loans—up to 7.75 per cent.

At 30 June 1972 savings banks operated 5,448 branches, 2,825 of these being in the 'metropolitan area'. Savings bank facilities were also available at 15,049 agencies throughout Australia.

## SAVINGS BANKS(a): LIABILITIES AND ASSETS(b), 1968 TO 1972

(\$ million)

## LIABILITIES

	Paid-up capital	Reserve funds (used in the business of the bank)	Balance of profit and loss account	Total share-holders' funds	Depositors' balances	Balances due to other banks	Bills payable and all other liabilities (c)	Total
1968 . .	24.0	125.0	6.5	155.4	6,284.4	13.3	203.9	6,657.0
1969 . .	25.0	132.7	6.7	164.4	6,783.5	13.4	222.2	7,183.6
1970 . .	31.0	137.4	7.3	175.7	7,161.2	14.2	236.6	7,587.7
1971 . .	31.0	149.8	8.4	189.2	7,722.0	16.8	258.9	8,186.9
1972 . .	31.5	171.0	8.9	211.4	8,547.1	19.2	293.9	9,071.7

## ASSETS

Australian public securities						
Coin, bullion, notes and deposits with Reserve Bank	Deposits in Australia with trading banks	Commonwealth and States		Local and semi- government authorities	Other securities	
		Treasury bills and notes	Other securities			
1968 . .	533.2	168.9	31.4	2,216.7	1,483.4	11.0
1969 . .	553.5	168.7	61.0	2,246.6	1,649.9	14.7
1970 . .	585.1	150.8	74.7	2,232.6	1,791.9	16.5
1971 . .	659.8	123.1	58.6	2,287.5	1,963.0	28.7
1972 . .	906.1	188.6	39.3	2,352.5	2,171.4	36.9

	Loans to authorised dealers in short-term money market	Cheques and bills of, and balances with and due from other banks(d)	Loans(e), advances and bills discounted	Bank premises, furniture and sites	Bills receivable and remittances in transit	All other assets	Total
1968 . .	27.5	6.7	2,026.1	83.0	1.6	67.5	6,657.0
1969 . .	40.1	9.7	2,270.5	90.5	2.0	76.4	7,183.6
1970 . .	54.1	167.8	2,337.3	98.2	0.4	78.3	7,587.7
1971 . .	78.6	195.0	2,602.9	102.6	0.3	86.9	8,186.9
1972 . .	55.9	212.7	2,897.7	111.5	0.1	99.0	9,071.7

(a) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (b) This table relates to liabilities and assets both inside and outside Australia. (c) Includes provisions for contingencies. (d) Includes deposits with and loans to specified lenders other than trading banks. (e) Other than loans to dealers in the short-term money market.

**SAVINGS BANKS(a): PROFIT AND LOSS, APPROPRIATION OF PROFITS AND  
DIVIDENDS, 1968 TO 1972**

(\$ million)

	<i>Profit and loss</i>			<i>Profits appropriated to—</i>				
	<i>Net earnings (b)</i>	<i>Ex- penses (c)</i>	<i>Income, land and other taxes and pay- ments in lieu of taxes</i>	<i>Net profit</i>	<i>Reserve funds</i>	<i>Writing- off bank premises</i>	<i>Other appro- priations</i>	<i>Dividends paid and proposed</i>
1968 . .	121.0	94.4	7.5	19.1	8.8	2.5	3.9	2.9
1969 . .	131.2	108.5	7.7	15.0	7.0	2.0	2.3	3.4
1970 . .	149.6	121.4	9.6	18.6	9.9	1.9	3.0	3.2
1971 . .	179.4	141.2	11.4	26.7	13.4	1.9	6.3	4.1
1972 . .	213.9	165.4	14.2	34.4	19.9	2.9	7.5	5.7

(a) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (b) Discount and interest earned, net exchange, commissions and other items (including transfers from contingencies accounts), after deducting interest paid and accrued on deposits, rebate on bills current at balance date, amounts written off assets, and losses on realisation of assets and transfers to the credit of contingencies accounts (out of which accounts provisions for all bad and doubtful debts have been made). (c) Includes directors' fees.

**SAVINGS BANKS BUSINESS TRANSACTED IN AUSTRALIA  
1967-68 TO 1971-72**

	<i>Number of operative accounts</i>	<i>Deposits (a)</i>	<i>With- drawals (a)</i>	<i>Interest added</i>	<i>Depositors' balances at end of year</i>
	'000	\$m	\$m	\$m	\$m
1967-68 . .	13,823	8,355.5	8,088.5	189.9	6,221.5
1968-69 . .	14,534	9,423.8	9,154.1	215.8	6,707.1
1969-70 . .	15,291	10,671.9	10,508.9	234.6	7,104.7
1970-71 . .	16,019	12,324.0	12,045.7	251.6	7,634.5
1971-72 . .	16,726	14,304.3	13,823.0	275.6	8,391.4

(a) Includes inter-branch transfers.

**SCHOOL SAVINGS BANKS: AUSTRALIA, 1968 TO 1972**

<i>End of June—</i>	<i>Number of school agencies</i>	<i>Number of operative accounts</i>	<i>Depositors' balances</i>
		'000	\$'000
1968 . . . .	10,400	1,516	26,482
1969 . . . .	10,957	1,584	28,476
1970 . . . .	11,042	1,600	28,079
1971 . . . .	10,923	1,598	28,808
1972 . . . .	10,874	1,615	26,700

**SAVINGS BANKS: HOUSING FINANCE TRANSACTIONS WITHIN AUSTRALIA  
1967-68 TO 1971-72**

*Housing loans approved to—*

*Individuals*

	<i>Dwellings not previously occupied</i>		<i>Dwellings previously occupied</i>		<i>Alterations and additions</i>	<i>Total</i>	<i>Building societies</i>
	<i>Number(a) '000</i>	<i>\$m(b)</i>	<i>Number(a) '000</i>	<i>\$m(b)</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>
1967-68(c) . .	25.1	180.9	32.5	207.4	6.6	395.0	22.0
1968-69(c) . .	26.1	200.7	33.8	230.9	7.5	439.1	19.5
1969-70 . . .	25.6	204.2	35.6	257.2	7.8	469.2	12.7
1970-71 . . .	27.7	237.9	40.5	320.3	9.0	567.2	16.6
1971-72 . . .	28.5	262.7	45.1	394.0	13.9	670.5	17.0

*Housing loans approved to individuals—*

*Balances outstanding  
on housing loans to—*

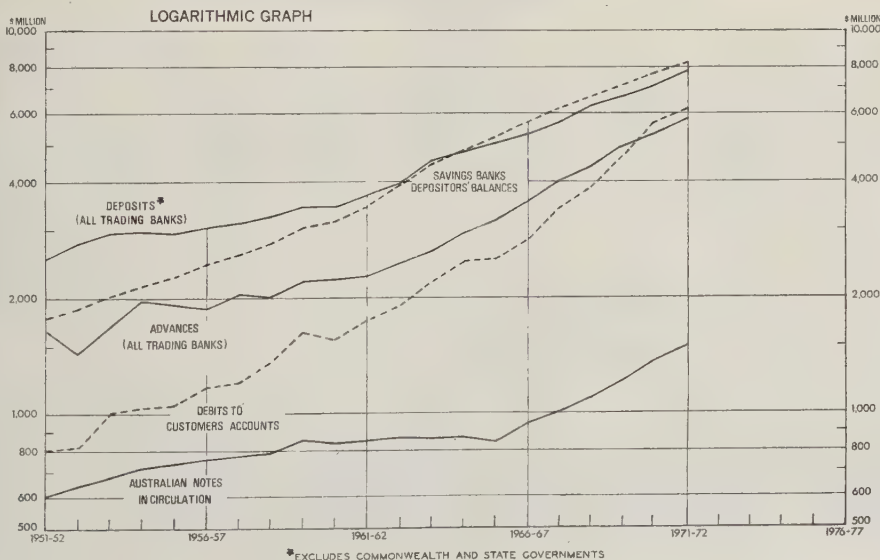
*Interest  
debited  
to loan*

Cancellation of loans previously approved(d)				Undrawn commitments at end of year	Individuals	Building societies	accounts of Individuals
Number(a) '000		\$m(b)	\$m	\$m(e)	\$m	\$m	
1967-68(c)	.	n.a.	n.a.	96.5	1,501.7	249.5	n.a.
1968-69(c)	.	n.a.	n.a.	105.1	1,715.2	246.3	n.a.
1969-70	.	3.6	26.5	114.4	1,898.3	245.3	106.9
1970-71	.	4.1	32.2	129.0	2,124.9	238.6	130.1
1971-72	.	4.2	35.3	161.0	2,392.0	227.6	141.8

(a) Number of dwelling units for which first mortgage loans approved. (b) Includes second mortgage finance to complete original purchase or construction. (c) Includes details relating to the external territories. (d) Includes amounts cancelled as a result of periodic examinations by banks of undrawn commitments. (e) Includes interest debited to loan accounts.

**BANKING: AUSTRALIA**

1951-52 TO 1971-72





## Development banks

### Commonwealth Development Bank of Australia

The Commonwealth Development Bank of Australia was established by the *Commonwealth Banks Act* 1959 and commenced operations on 14 January 1960. It was formed basically from an amalgamation of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank. Under the Act the Bank is authorised to provide assistance for the development of worthwhile enterprises in the fields of primary and secondary industries, which would otherwise be unable to obtain the necessary finance on reasonable and suitable terms and conditions. The Commonwealth Development Bank is managed by a General Manager under the Managing Director of the Commonwealth Banking Corporation and its policy is determined by the Board of that Corporation. The capital of the Development Bank consists of the capital of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank immediately prior to 14 January 1960, \$10 million provided by the Reserve Bank, \$20 million appropriated from the Consolidated Revenue Fund in 1961-62 by the *Commonwealth Banks Act* 1961 and the *Commonwealth Banks Act* 1962, \$10 million appropriated in 1963-64 by the *Commonwealth Banks Act* 1963, and such other sums as are provided from the Commonwealth Development Bank Reserve Fund. The net profits of the Bank are paid to the Commonwealth Development Bank Reserve Fund, which at 30 June 1972 stood at \$32.5 million. Net profits in 1970-71 and 1971-72 amounted to \$1.8 million and \$1.5 million respectively.

#### COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA: LIABILITIES 30 JUNE 1968 TO 1972

(\$ million)

30 June—	Capital	Reserve fund	Balances due to other banks	Deposits, bills payable, all other liabilities	Total
1968 . . .	61.7	25.2	112.8	32.3	232.0
1969 . . .	61.7	27.2	131.3	34.7	254.9
1970 . . .	61.7	29.3	142.2	32.5	265.6
1971 . . .	61.7	31.0	157.7	32.3	282.7
1972 . . .	61.7	32.5	159.8	42.0	296.0

#### COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA: ASSETS 30 JUNE 1968 TO 1972

(\$ million)

30 June—	Coin, bullion, notes and cash at bankers	Australian public securities (incl. Treasury bills)	Other securities	Loans to authorised dealers in short-term money market	Cheques and bills of other banks	Loans, advances, and bills discounted	All other assets	Total
1968 . . .	0.5	1.2	0.3	0.4	1.4	227.5	0.8	232.0
1969 . . .	0.8	1.2	0.2	..	1.5	250.2	0.9	254.9
1970 . . .	0.8	0.8	0.3	..	1.7	261.0	1.0	265.6
1971 . . .	0.8	0.7	0.2	..	1.9	277.8	1.2	282.7
1972 . . .	0.9	0.5	..	0.8	2.3	290.4	1.0	296.0

### Australian Resources Development Bank Limited

The Australian Resources Development Bank Limited was established in 1967 with equity capital of \$3 million subscribed by the major trading banks. It was given the status of a bank by the *Banking Act* 1967 and opened for business on 29 March 1968. The main object of the Australian Resources Development Bank is to assist Australian enterprises to participate more fully in the development of Australia's natural resources. It provides finance to enterprises engaged in major developmental projects by direct loans, investing in equity capital or by refinancing loans made by trading banks acting individually or as a group. The Australian Resources Development Bank obtains funds by accepting deposits and by borrowing on the Australian and overseas capital markets.

**AUSTRALIAN RESOURCES DEVELOPMENT BANK LIMITED: LIABILITIES**  
**30 SEPTEMBER 1969 TO 1972**  
(\$ million)

30 September—	Capital	Reserve fund	Balances due to other banks	Deposits, bills payable, all other liabilities	Total
1969 . . .	3.0	0.3	15.4	73.2	91.9
1970 . . .	3.0	0.5	27.7	163.6	194.8
1971 . . .	3.0	1.3	42.3	256.6	303.1
1972 . . .	3.0	2.8	53.8	304.4	364.0

**AUSTRALIAN RESOURCES DEVELOPMENT BANK LIMITED: ASSETS**  
**30 SEPTEMBER 1969 TO 1972**  
(\$ million)

30 September—	Coin, bullion, notes and cash at bankers	Australian public securities (incl. Treasury bills)	Other securities	Loans to authorised dealers in short-term money market	Cheques and bills of other banks	Loans, advances, and bills discounted	All other assets	Total
1969 . . .	0.3	0.2	..	0.1	89.8	1.0	0.4	91.9
1970 . . .	..	0.2	..	3.0	187.3	3.1	1.1	194.8
1971 . . .	0.1	0.2	0.1	9.4	283.6	6.2	3.4	303.1
1972 . . .	..	0.2	0.3	10.0	326.5	15.5	11.6	364.0

## INSURANCE

### Legislation

Section 51 of the Commonwealth Constitution confers the necessary powers on the Commonwealth Parliament to legislate with respect to 'insurance other than State insurance; also State insurance extending beyond the limits of the State concerned'. Commonwealth legislation includes the *Marine Insurance Act* 1909–1966 defining the limits of marine insurance and regulating the terms of contracts, etc., the *Insurance Act* 1932–1966 requiring the lodgment of deposits by insurance companies, and the *Life Insurance Act* 1945–1965 generally regulating life insurance business in Australia. The *Marine Insurance Act* 1909–1966 and the *Insurance Act* 1932–1966 have limited application, and except for life insurance business, which is regulated by the *Life Insurance Act* 1945–1965, insurance business is conducted almost entirely under State laws.

### Insurance Act 1932–1966

Companies, persons or associations of persons carrying on insurance business in Australia or in any Territory of Australia are required to lodge a deposit with the Commonwealth Treasurer. Money deposited is invested by the Treasurer in prescribed securities selected by the depositor and all interest is paid to depositors. Deposits remain as security against liability to policy holders and are available to satisfy judgments obtained in respect of policies. Deposits held by States on 1 February 1932 could, however, remain with the States subject to the conditions embodied in the laws of the States, and depositors to the extent of the value of these deposits were exempt from liability to make deposits under the Commonwealth Act.

The following are not regarded as insurance business under the Act: staff superannuation schemes; schemes of religious organisations solely for insurance of their property; friendly society, union and association schemes involving superannuation or insurance benefits to employees.

This Act does not apply to State insurance within the limits of the State concerned, and under the *Life Insurance Act* 1945–1965 ceased to apply to life insurance business.

### Life Insurance Act 1945–1965

The objects of this Act are: (a) to replace all State legislation on the subject of life insurance, except that relating to the life insurance operations of State Government insurance offices within the State concerned, and to provide uniform legislation for the whole of Australia; (b) to appoint an Insurance Commissioner to exercise active supervision of the activities of life insurance companies, with a view to securing the greatest possible protection for policy holders; (c) to set up adequate

machinery for dealing with any company that fails to maintain a required minimum standard of solvency. The Act came into operation on 20 June 1946. A summary of the provisions of the Act is given in Year Book No. 37, pages 595-7. The Insurance Commissioner issues an annual report which contains detailed information on the operations of life insurance companies.

### Deposits under Insurance Acts

Deposits lodged under the Insurance Acts at 30 June 1972 totalled \$40.6 million, comprising \$4.9 million held by the Commonwealth in respect of life insurance, and \$35.7 million held by the Commonwealth in respect of other forms of insurance. The deposits consisted of Commonwealth Government securities \$24.6 million, United Kingdom Government securities \$2.0 million, fixed deposits \$1.1 million, bank guarantees and undertakings \$9.9 million, corporation debentures and stock \$0.8 million, titles and mortgages \$2.0 million, and other securities \$0.2 million.

### Life insurance

Since 1947, returns lodged under the *Life Insurance Act 1945-1965* have been used to compile life insurance statistics. The statistics included in the following tables relate to the Australian and overseas business of companies with head offices in Australia together with the Australian business of companies with head offices overseas. Unless otherwise stated, life insurance business in Australia excludes life insurance business in Papua New Guinea. The information shown has been compiled from returns of life insurance business submitted in the financial years which ended during the year stated.

### Offices transacting business

The number of companies which transacted life insurance business in Australia during 1971 was 48. Of these, 35 were companies incorporated outside Australia or were subsidiaries of such companies. Nine companies, including 4 incorporated outside Australia, were mutual companies. All companies conducted ordinary business and 46 conducted superannuation business. Industrial business was conducted by 11 companies, all of which also conducted superannuation business. In addition two State Government institutions conduct life insurance business only in their own State.

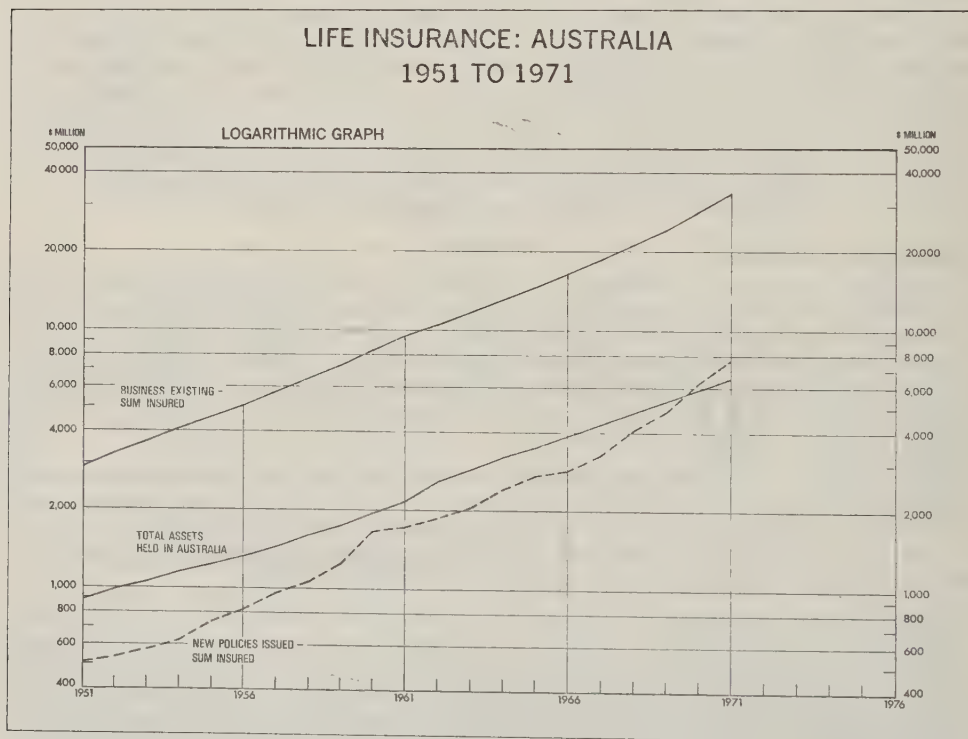


PLATE 33



## LIFE INSURANCE: SUMMARY, AUSTRALIA, 1967 TO 1971

	Insurance and endowment policies			Annuity policies	
	Number of policies	Sum insured (\$ million)	Annual premiums (\$ million)	Number of policies	Annuities per annum (\$ million)
ORDINARY BUSINESS					
New policies issued—					
1967(a)	409,403	2,102.5	47.3	85	0.1
1968(a)	436,928	2,606.6	59.1	95	0.1
1969	464,062	3,088.4	65.7	109	0.1
1970	504,613	3,777.9	75.3	55	0.1
1971	569,370	4,882.6	91.5	66	0.1
Policies discontinued or reduced(b)—					
1967(a)	246,139	709.4	17.4	210	0.1
1968(a)	258,639	799.7	18.2	186	0.1
1969	248,906	974.3	20.3	181	0.1
1970	273,765	1,153.2	24.5	204	0.1
1971	293,708	1,510.0	28.0	109	..
Policies existing at end of—					
1967(a)	4,351,564	13,016.1	329.2	2,268	1.0
1968(a)	4,529,853	14,823.0	370.1	2,177	1.1
1969	4,676,164	16,806.1	411.7	2,065	1.3
1970	4,907,012	19,430.8	462.6	1,951	1.1
1971	5,182,123	22,803.4	525.7	1,906	1.1
INDUSTRIAL BUSINESS					
New policies issued—					
1967(a)	136,764	140.4	5.5	..	..
1968(a)	132,504	145.7	5.8	..	..
1969	139,360	165.0	6.5	..	..
1970	138,647	198.5	7.3	..	..
1971	135,384	231.4	8.0	..	..
Policies discontinued or reduced(b)—					
1967(a)	177,219	77.7	3.3	..	..
1968(a)	174,576	86.3	3.7	..	..
1969	169,893	91.1	3.8	..	..
1970	168,600	100.6	4.1	..	..
1971	165,067	115.0	4.5	..	..
Policies existing at end of—					
1967(a)	2,603,178	981.2	40.3	..	..
1968(a)	2,561,106	1,040.6	42.4	..	..
1969	2,530,386	1,114.4	45.1	..	..
1970	2,500,433	1,212.3	48.3	..	..
1971	2,470,750	1,328.7	51.8	..	..
SUPERANNUATION BUSINESS					
New policies issued—					
1967(a)	88,478	1,053.3	29.4	81	8.6
1968(a)	89,085	1,328.1	33.1	83	6.3
1969	94,771	1,591.6	41.7	64	5.0
1970	74,334	2,298.6	58.8	60	10.6
1971	78,005	2,785.3	72.4	45	12.9
Policies discontinued or reduced(b)—					
1967(a)	73,319	434.7	11.3	44	3.1
1968(a)	67,338	539.8	14.3	60	7.0
1969	114,664	709.1	17.7	43	7.8
1970	126,552	940.0	26.5	33	4.5
1971	87,208	1,129.0	29.4	28	4.7
Policies existing at end of—					
1967(a)	699,735	4,745.4	135.3	905	28.8
1968(a)	721,482	5,533.7	154.2	928	28.1
1969	752,302	6,439.2	179.2	950	25.4
1970	699,652	7,797.8	211.5	977	31.4
1971	690,451	9,454.2	254.5	980	39.6

(a) Includes life insurance business in Papua New Guinea. (b) Includes policies matured, surrendered, forfeited, transferred to overseas registers, converted to other classes of business, etc.

**LIFE INSURANCE: POLICIES DISCONTINUED OR REDUCED IN AUSTRALIA  
BY CAUSE OF DISCONTINUANCE OR REDUCTION, 1967 TO 1971(a)(b)**

Events provided for in policy								
	Death	Maturity	Other (including expiry)	Sur- render	For- feiture	Transfer	Other causes	Total
ORDINARY BUSINESS								
Number of policies—								
1967(c) . . . .	20,886	68,425	3,127	97,985	62,126	-1,104	-5,306	246,139
1968(c) . . . .	22,532	70,339	2,903	104,415	60,504	-1,967	-87	258,639
1969 . . . .	21,957	69,445	3,577	107,713	55,885	-2,385	-7,286	248,906
1970 . . . .	23,047	73,132	4,241	121,917	65,380	-1,786	-12,166	273,765
1971 . . . .	23,138	75,516	4,654	128,879	68,741	-1,442	-5,778	293,708
Sum insured (\$'000)—								
1967(c) . . . .	39,817	49,248	83,020	272,396	273,629	-4,474	-4,235	709,402
1968(c) . . . .	46,144	52,568	92,477	309,793	315,594	-6,543	-10,340	799,694
1969 . . . .	48,298	55,046	165,033	425,186	291,956	-9,737	-1,503	974,278
1970 . . . .	54,235	63,201	158,407	506,645	394,872	-8,346	-15,845	1,153,169
1971 . . . .	61,256	69,738	217,760	731,739	465,615	-5,990	-30,130	1,509,988
INDUSTRIAL BUSINESS								
Number of policies—								
1967(c) . . . .	12,368	67,134	3,806	62,421	31,602	63	-175	177,219
1968(c) . . . .	12,689	58,945	7,370	61,374	34,460	-255	-7	174,576
1969 . . . .	11,947	67,716	..	55,481	34,861	-133	21	169,893
1970 . . . .	12,554	69,069	-1	52,432	34,610	40	-104	168,600
1971 . . . .	13,745	65,575	..	50,901	34,879	-26	-7	165,067
Sum insured (\$'000)—								
1967(c) . . . .	2,601	9,237	744	27,537	37,527	45	-5	77,688
1968(c) . . . .	2,843	8,640	1,524	31,937	41,457	-96	9	86,314
1969 . . . .	2,800	10,760	..	32,307	45,247	-22	1	91,095
1970 . . . .	3,152	11,236	..	34,841	51,316	54	18	100,617
1971 . . . .	3,673	12,199	62	37,226	61,855	6	21	115,042
SUPERANNUATION BUSINESS								
Number of policies—								
1967(c) . . . .	3,793	7,428	983	38,421	1,542	3	21,150	73,319
1968(c) . . . .	3,390	7,806	103	36,881	1,447	-11	17,722	67,338
1969 . . . .	3,881	8,381	185	48,870	1,471	9	51,867	114,664
1970 . . . .	3,661	9,193	181	53,065	1,655	5	58,792	126,552
1971 . . . .	3,712	8,938	632	44,651	1,535	-9	27,749	87,208
Sum insured (\$'000)—								
1967(c) . . . .	15,256	14,189	29,425	258,790	18,517	38	98,513	434,727
1968(c) . . . .	16,659	17,330	44,596	341,571	22,172	-92	97,566	539,802
1969 . . . .	19,058	18,639	53,617	430,440	19,024	-31	168,389	709,136
1970 . . . .	23,053	23,573	72,008	605,648	21,848	-1,063	194,976	940,043
1971 . . . .	25,471	30,083	148,506	708,678	24,752	2,076	189,383	1,128,950

(a) Excludes annuities. (b) See footnote (b) on page 515. (c) Includes life insurance business in Papua New Guinea.  
 Minus sign (—) denotes an increase in existing business due to an excess of transfers from overseas registers to Australian registers, or conversions from other classes of business over discontinuances.

LIFE INSURANCE: REVENUE FROM PREMIUMS, AUSTRALIA, 1967 TO 1971  
(\$'000)

			<i>Ordinary business</i>		<i>Industrial business</i>	<i>Superannuation business</i>		<i>Total, all business combined</i>
			<i>Insurance and endowment premiums</i>	<i>Consideration for annuities</i>	<i>Insurance and endowment premiums</i>	<i>Insurance and endowment premiums</i>	<i>Consideration for annuities</i>	
1967(a)	.	.	327,258	606	38,564	142,566	9,495	518,489
1968(a)	.	.	371,941	1,132	40,716	165,530	9,893	589,212
1969	.	.	418,206	1,302	42,978	187,439	9,768	659,693
1970	.	.	472,120	675	45,987	222,995	11,967	753,745
1971	.	.	545,217	620	49,200	259,208	13,259	867,503

(a) Includes life insurance business in Papua New Guinea.

LIFE INSURANCE: PAYMENTS TO POLICY-HOLDERS, AUSTRALIA  
1967 TO 1971  
(\$'000)

	<i>Claims</i>	<i>Surrenders</i>	<i>Annuities</i>	<i>Cash bonuses</i>	<i>Total</i>
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ORDINARY BUSINESS

1967(a)	.	.	115,631	40,722	931	851	158,134
1968(a)	.	.	128,307	46,235	949	1,280	176,771
1969	.	.	139,781	53,526	977	1,338	195,622
1970	.	.	159,360	67,029	994	1,487	228,870
1971	.	.	180,923	81,511	995	1,606	265,035

INDUSTRIAL BUSINESS

1967(a)	.	.	14,517	6,185	..	..	20,702
1968(a)	.	.	14,757	6,590	..	1	21,348
1969	.	.	15,909	6,614	..	1	22,525
1970	.	.	17,496	6,953	..	..	24,450
1971	.	.	19,102	7,560	..	..	26,661

SUPERANNUATION BUSINESS

1967(a)	.	.	34,117	27,649	2,401	1,025	65,193
1968(a)	.	.	40,437	33,854	2,694	1,207	78,192
1969	.	.	45,333	42,374	3,143	1,003	91,853
1970	.	.	57,666	55,200	3,077	998	116,940
1971	.	.	66,588	62,848	4,012	1,109	134,558

(a) Includes life insurance business in Papua New Guinea.



**LIFE INSURANCE: TOTAL REVENUE, 1967-1971**  
(\$'000)

<i>Australia and overseas</i>							
	<i>Insurance and endowment premiums</i>	<i>Consideration for annuities granted</i>	<i>Net interest dividends and rents</i>	<i>All other revenue</i>	<i>Total revenue</i>		
					<i>Australia (a)</i>	<i>Overseas</i>	
ORDINARY BUSINESS							
1967 . . . .	445,631	10,483	206,809	20,042	493,627	189,342	
1968 . . . .	491,446	10,794	225,001	43,544	572,737	198,047	
1969 . . . .	545,681	10,730	250,938	39,431	635,488	211,294	
1970 . . . .	610,678	10,299	279,643	50,724	719,140	232,204	
1971 . . . .	695,185	11,860	315,409	58,467	828,437	252,485	
INDUSTRIAL BUSINESS							
1967 . . . .	42,999	..	20,500	478	57,146	6,831	
1968 . . . .	44,915	..	21,995	1,848	62,196	6,561	
1969 . . . .	47,269	..	23,946	1,202	65,563	6,855	
1970 . . . .	50,377	..	26,701	1,335	71,325	7,087	
1971 . . . .	53,770	..	27,904	2,739	77,024	7,390	
SUPERANNUATION BUSINESS							
1967 . . . .	151,245	10,674	54,940	3,582	207,083	13,359	
1968 . . . .	174,697	11,141	63,180	12,706	247,003	14,721	
1969 . . . .	197,456	11,237	71,974	13,913	278,294	16,284	
1970 . . . .	233,518	13,825	83,331	28,026	339,175	19,525	
1971 . . . .	271,748	16,389	94,313	38,179	399,178	21,449	

(a) Includes life insurance business in Papua New Guinea.

**LIFE INSURANCE: TOTAL EXPENDITURE, 1967 TO 1971**  
(\$'000)

Australia and overseas									
		Claims and annuities paid	Surren- ders	Cash bonuses paid to policy- holders	Com- mission	Other expenses of manage- ment	All other expendi- ture	Total expenditure	
								Australia (a)	Overseas
ORDINARY BUSINESS									
1967	.	172,580	56,485	1,624	44,113	51,258	(b)137,105	240,693	222,472
1968	.	186,897	62,942	2,088	50,812	55,574	87,503	273,542	172,273
1969	.	202,122	74,582	2,260	59,152	62,856	29,663	309,235	121,400
1970	.	228,462	88,708	2,464	68,885	72,105	29,093	360,745	128,971
1971	.	252,679	105,049	2,616	84,356	87,701	35,986	428,482	139,902
INDUSTRIAL BUSINESS									
1967	.	16,851	6,795	..	6,255	7,211	(b)7,719	34,093	10,741
1968	.	16,445	7,211	1	6,383	7,224	5,629	35,852	7,042
1969	.	18,476	7,256	1	6,818	7,797	2,720	38,306	4,762
1970	.	20,104	7,620	..	7,557	8,682	2,060	41,099	4,926
1971	.	21,635	8,224	..	8,620	10,281	2,725	46,262	5,222
SUPERANNUATION BUSINESS									
1967	.	39,255	29,330	1,105	5,888	12,032	(b)25,702	93,401	19,914
1968	.	46,784	35,767	1,288	6,375	13,689	18,008	114,323	7,588
1969	.	51,483	45,719	1,088	6,936	14,826	26,830	138,032	8,850
1970	.	64,936	58,608	1,069	8,019	17,181	55,262	192,669	12,406
1971	.	75,329	66,839	1,187	9,329	20,368	61,664	222,771	11,947

(a) Includes life insurance business in Papua New Guinea. (b) Includes adjustments which have resulted from Sterling devaluation on 18 November 1967.

**LIFE INSURANCE: LIABILITIES, AUSTRALIA AND OVERSEAS, 1971**  
(\$ million)

	<i>Life insurance business</i>	<i>Other classes of business</i>	<i>Total liabilities</i>
Shareholders' capital—			
Authorised . . . . .	..	73.6	73.6
Less un-issued . . . . .	..	42.2	42.2
Subscribed capital . . . . .	..	31.4	31.4
Paid-up—			
In money . . . . .	..	25.9	25.9
Otherwise than in money . . . . .	..	4.8	4.8
Total paid-up capital . . . . .	..	30.6	30.6
Life insurance statutory funds—			
Ordinary business . . . . .	5,551.2	..	5,551.2
Industrial business . . . . .	503.5	..	503.5
Superannuation business . . . . .	1,579.1	..	1,579.1
Total statutory funds . . . . .	7,633.8	..	7,633.8
Funds in respect of other classes of business . . . . .	..	39.5	39.5
General reserves . . . . .	64.8	41.3	106.1
Profit and loss account balance . . . . .	..	6.4	6.4
Total shareholders' capital, insurance funds and reserves . . . . .	7,698.6	117.8	7,816.4
Other liabilities—			
Deposits . . . . .	35.5	12.0	47.6
Staff provident and superannuation funds . . . . .	1.7	2.8	4.5
Claims admitted or intimated but not paid . . . . .	77.2	32.3	109.5
Premiums paid in advance and in suspense . . . . .	7.4	..	7.5
Sundry creditors . . . . .	45.5	5.1	50.6
Bank overdraft . . . . .	47.4	0.4	47.9
Reserves and provisions for taxation . . . . .	53.6	5.1	58.7
All other liabilities . . . . .	13.2	19.0	32.2
Grand total . . . . .	7,980.2	194.6	8,174.8

**LIFE INSURANCE(a): ASSETS HELD IN AUSTRALIA(b), 1967 TO 1971**  
(\$ million)

	1967	1968	1969	1970	1971
Freehold and leasehold property . . . . .	434.7	501.0	636.6	761.6	948.3
Government and municipal securities . . . . .	1,395.6	1,536.2	1,665.5	1,819.3	2,052.5
Other investments . . . . .	1,073.4	1,241.3	1,408.7	1,578.4	1,727.8
Loans on mortgage . . . . .	1,036.8	1,108.9	1,188.3	1,235.4	1,252.9
Loans on companies' policies . . . . .	155.1	174.4	195.5	223.0	251.8
Other loans . . . . .	44.2	54.1	57.8	57.1	60.3
All other assets . . . . .	153.0	177.2	201.2	236.3	270.3
Total . . . . .	4,292.7	4,793.1	5,353.8	5,911.1	6,563.8

(a) Includes other classes of business.

(b) Includes Papua New Guinea.

**LIFE INSURANCE: ASSETS, AUSTRALIA AND OVERSEAS, 1971**  
(\$'000)

	<i>Australia(a)</i>			<i>Australia and overseas</i>		
	<i>Life insurance business</i>	<i>Other classes of business</i>	<i>Total</i>	<i>Life insurance business</i>	<i>Other classes of business</i>	<i>Total</i>
<b>Fixed assets—</b>						
Freehold and leasehold property, office premises .	938.5	9.8	948.3	1,119.7	9.8	1,129.5
Furniture, etc. . . . .	11.1	1.0	12.1	12.8	1.0	13.9
<i>Total fixed assets</i> . . . . .	<i>949.6</i>	<i>10.8</i>	<i>960.4</i>	<i>1,132.6</i>	<i>10.8</i>	<i>1,143.4</i>
<b>Loans—</b>						
On mortgage . . . . .	1,238.6	14.3	1,252.9	1,649.0	14.3	1,663.3
On policies of the company . . . . .	251.8	..	251.8	318.5	..	318.5
Other loans . . . . .	53.7	6.6	60.3	62.2	6.6	68.7
<i>Total loans</i> . . . . .	<i>1,544.1</i>	<i>20.9</i>	<i>1,565.0</i>	<i>2,029.7</i>	<i>20.9</i>	<i>2,050.6</i>
<b>Investments—</b>						
Government securities—						
Australia . . . . .	1,447.5	12.3	1,459.8	1,456.1	12.3	1,468.4
Other . . . . .	10.5	0.6	11.1	390.4	2.2	392.6
Securities of local and semi-government bodies . . . . .	577.6	4.0	581.6	684.1	4.1	688.2
Other investments . . . . .	1,628.8	99.1	1,727.8	2,027.7	99.7	2,127.2
<i>Total investments</i> . . . . .	<i>3,664.3</i>	<i>115.9</i>	<i>3,780.2</i>	<i>4,558.4</i>	<i>118.2</i>	<i>4,676.6</i>
Cash on deposit, current account and in hand . . . . .	20.4	14.0	34.4	23.4	14.1	37.6
Other assets(b) . . . . .	194.1	29.9	223.8	236.2	30.5	266.7
<b>Grand total</b> . . . . .	<b>6,372.3</b>	<b>191.4</b>	<b>6,563.8</b>	<b>7,980.2</b>	<b>194.6</b>	<b>8,174.8</b>

(a) Includes Papua New Guinea. (b) Includes advances of premiums.

**LIFE INSURANCE COMPANIES: NEW LOANS PAID OVER(a), BY CLASS OF SECURITY AND STATE OR TERRITORY, 1968 TO 1972**  
(\$'000)

	<i>1968(b)</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>	<i>1972</i>
<b>Class of security—</b>					
Mortgage of real estate . . . . .	161,651	187,498	156,544	157,459	132,958
Companies' policies . . . . .	41,818	48,482	60,920	65,571	58,448
Other . . . . .	6,485	8,049	12,439	10,380	19,497
<b>State or Territory(c)—</b>					
New South Wales . . . . .	91,761	100,726	88,551	104,057	90,048
Victoria . . . . .	58,754	68,576	68,632	61,711	59,671
Queensland . . . . .	(d)18,523	24,672	24,144	21,633	24,065
South Australia(e) . . . . .	14,477	17,492	16,456	18,307	13,526
Western Australia . . . . .	19,157	23,965	22,341	19,588	13,189
Tasmania . . . . .	5,491	6,418	6,081	4,688	4,425
Australian Capital Territory . . . . .	1,790	2,178	3,698	3,425	5,977
<b>Total</b> . . . . .	<b>(d)209,953</b>	<b>244,029</b>	<b>229,903</b>	<b>233,410</b>	<b>210,904</b>

(a) Excludes advances of premiums. (b) Excludes new loans paid over by the two State Government Offices.  
(c) State or Territory of location of mortgage, registration of policy or residence of borrower. (d) Includes Papua New Guinea. (e) Includes Northern Territory.



### Fire, marine and general insurance

The following statistics, which are in respect of the Australian business of companies operating in Australia and State Government insurance offices, conform to the following definitions and should be interpreted accordingly.

- (a) *Premiums* represent the full amount receivable in respect of policies issued or renewed in the year, less returns, rebates and bonuses paid or credited to policy-holders during the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts differ from 'earned premium income' appropriate to the year. In recent years, as the volume of premiums receivable has been increasing, the figures shown in the tables are greater than the premiums earned by insurers.
- (b) *Claims* comprise payments made during the year, plus the estimated amount of outstanding claims at the end of the year, less the estimated amount of outstanding claims at the beginning of the year. Salvage and other amounts recoverable have been deducted.
- (c) *Contributions to fire brigades, commission and agents' charges, and expenses of management* are mainly charges paid during the year.
- (d) *Taxation* is mainly payments made during the year, and includes income tax, pay-roll tax, licence fees, stamp duty (where paid by the company), etc. Income tax paid during the year is based on the income of earlier years.

The figures relate to selected items of statistics and are not construable as 'Profit and Loss' statements or 'Revenue Accounts'.

During 1971-72 revenue from premiums amounted to \$1,005.1 million, and that from net interest on investments, etc., to \$71.2 million, a total of \$1,076.4 million. Expenditure on claims amounted to \$648.5 million, contributions to fire brigades \$26.1 million, commission and agents' charges \$85.0 million, expenses of management \$167.4 million, and taxation \$27.9 million, a total of \$954.8 million.

#### FIRE, MARINE AND GENERAL INSURANCE: PREMIUMS AND CLAIMS BY PRINCIPAL CLASS OF RISK, AUSTRALIA, 1967-68 TO 1971-72 (\$'000)

<i>Class of risk</i>	1967-68	1968-69	1969-70	1970-71	1971-72
<b>PREMIUMS (LESS RETURNS, REBATES AND BONUSES)</b>					
Fire . . . . .	97,985	106,045	115,332	125,912	143,598
Householders' comprehensive . . . . .	47,581	54,619	63,036	72,198	85,006
Loss of profits . . . . .	12,169	13,691	15,206	18,939	22,612
Hailstone(a) . . . . .	4,375	7,455	5,242	4,531	4,420
Marine . . . . .	28,899	34,059	40,317	48,172	50,580
Motor vehicle—					
Compulsory third party . . . . .	97,883	127,593	143,903	157,814	176,397
Other . . . . .	193,975	205,171	226,819	252,225	300,342
Workers' compensation(b) . . . . .	142,727	149,197	164,574	181,792	236,546
Personal accident . . . . .	25,564	28,465	32,080	36,559	42,638
Burglary . . . . .	11,604	13,586	14,995	16,382	18,726
All other . . . . .	51,419	59,713	69,845	86,610	107,478
<b>Total . . . . .</b>	<b>714,180</b>	<b>799,593</b>	<b>891,351</b>	<b>1,001,134</b>	<b>1,188,343</b>
<b>CLAIMS (LESS AMOUNTS RECOVERABLE)</b>					
Fire . . . . .	44,119	48,769	54,498	58,559	68,722
Householders' comprehensive . . . . .	15,260	19,871	21,159	24,060	33,996
Loss of profits . . . . .	3,840	5,397	4,488	5,040	3,968
Hailstone(a) . . . . .	2,453	2,531	5,635	3,510	4,514
Marine . . . . .	16,712	21,323	23,008	25,238	25,333
Motor vehicle—					
Compulsory third party . . . . .	110,456	118,639	147,584	152,056	181,671
Other . . . . .	133,709	148,810	172,031	186,673	217,932
Workers' compensation(b) . . . . .	100,323	106,618	117,435	126,850	165,021
Personal accident . . . . .	10,481	11,757	13,376	15,224	16,705
Burglary . . . . .	7,187	7,460	8,121	8,844	10,618
All other . . . . .	25,689	27,400	32,244	39,999	44,639
<b>Total . . . . .</b>	<b>470,227</b>	<b>518,575</b>	<b>599,580</b>	<b>646,052</b>	<b>773,119</b>

(a) Excludes hailstone insurance in Tasmania which is included in 'All other' workers' compensation insurance in coal-mining industry in New South Wales.

(b) Excludes

### Export Payments Insurance Corporation

The Export Payments Insurance Corporation was established under the *Export Payments Insurance Corporation Act* 1956 to provide exporters with insurance against risks associated with overseas trade. For further information on the Corporation see Chapter 11, Overseas Transactions.

#### EXPORT PAYMENTS INSURANCE CORPORATION: BUSINESS, 1967-68 TO 1971-72

		1967-68	1968-69	1969-70	1970-71	1971-72
<b>Commercial business—</b>						
Policies and guarantees . . . . .	No.	692	746	809	941	1,037
Face value of policies current . . . . .	\$'000	271,076	298,829	343,064	511,105	621,955
Maximum contingent liability . . . . .	„	141,108	158,966	190,067	301,061	375,358
Premium income . . . . .	„	651	730	861	1,025	1,602
Operating costs . . . . .	„	388	426	516	585	686
Claims paid (gross) . . . . .	„	854	388	353	939	422
Recoveries . . . . .	„	591	263	212	693	165
Underwriting reserve . . . . .	„	1,420	1,897	2,401	2,997	4,023
<b>National interest and warehousing business—</b>						
Policy holders . . . . .	No.	3	1	2	4	13
Face value of policies current . . . . .	\$'000	2,247	1,208	2,420	63,793	208,292
Maximum contingent liability . . . . .	„	1,978	1,087	2,183	42,487	126,232
<b>Overseas investment insurance—</b>						
Policies . . . . .	No.	29	41	56	78	96
Face value of policies . . . . .	\$'000	12,097	19,813	19,505	44,535	47,636
Maximum contingent liability . . . . .	„	10,887	17,832	17,555	40,081	42,872

### PENSION AND SUPERANNUATION SCHEMES

#### Government, local government and semi-government pension and superannuation schemes

The Commonwealth and all State Governments have established pension and superannuation schemes for their employees. These schemes are operated through funds to which both the Governments and their employees make contributions. Employees of local government and semi-government authorities are covered either by the Commonwealth and State Government schemes or by a separate scheme of the authority which is operated either through a separately constituted fund or through a life insurance office.

## Schemes operated through separately constituted funds

GOVERNMENT, LOCAL GOVERNMENT, AND SEMI-GOVERNMENT PENSION AND  
SUPERANNUATION SCHEMES OPERATED THROUGH SEPARATELY  
CONSTITUTED FUNDS, 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
	\$'000	\$'000	\$'000	\$'000	\$'000
<b>Income—</b>					
Contributions—					
Employees . . . . .	100,024	114,091	132,813	157,973	193,602
Employing authorities . . . . .	119,429	136,782	148,445	171,918	219,558
Interest, dividends and rent . . . . .	72,015	82,002	93,444	104,889	125,831
Transfers . . . . .	..	..	..	..	29
Other income . . . . .	15,465	10,278	10,663	12,734	12,833
<b>Total income . . . . .</b>	<b>306,934</b>	<b>343,153</b>	<b>385,364</b>	<b>447,513</b>	<b>551,853</b>
<b>Expenditure—</b>					
Pensions . . . . .	118,473	130,658	144,350	161,177	193,984
Lump sum payments—					
On retirement, death, resignation or dismissal(a) . . . . .	32,196	40,818	72,509	69,334	88,628
Gratuities . . . . .	2,655	3,446	4,496	4,459	4,124
Other expenditure . . . . .	11,581	14,472	14,408	15,877	18,689
<b>Total expenditure . . . . .</b>	<b>164,906</b>	<b>189,394</b>	<b>235,764</b>	<b>250,847</b>	<b>305,424</b>
<b>Assets at end of year—</b>					
Cash—					
Deposits with Treasury . . . . .	39,933	44,159	48,894	60,270	65,649
Other deposits and cash . . . . .	7,802	11,283	17,503	31,676	29,271
Commonwealth Government securities . . . . .	125,497	142,401	143,093	166,125	188,465
Local and semi-government securities . . . . .	845,450	920,929	1,004,392	1,077,769	1,192,393
Mortgages—					
Housing . . . . .	31,722	34,073	37,903	39,619	44,159
Other . . . . .	103,537	129,696	169,201	220,878	285,956
Loans to building societies . . . . .	31,385	33,081	34,370	34,893	52,775
Company shares, debentures and notes . . . . .	97,409	106,770	122,007	121,518	157,657
Other assets . . . . .	95,955	110,771	108,474	129,961	152,099
<b>Total assets(b) . . . . .</b>	<b>1,378,690</b>	<b>1,533,162</b>	<b>1,685,838</b>	<b>1,882,708</b>	<b>2,168,423</b>
<b>Less Sundry creditors, etc. . . . .</b>	<b>18,342</b>	<b>19,056</b>	<b>22,132</b>	<b>22,335</b>	<b>32,105</b>
<b>Accumulated funds(b) . . . . .</b>	<b>1,360,347</b>	<b>1,514,106</b>	<b>1,663,707</b>	<b>1,860,373</b>	<b>2,136,318</b>
	No.	No.	No.	No.	No.
Contributors at end of year . . . . .	547,684	595,158	598,738	619,630	678,034
Pensioners at end of year—					
Ex-employees . . . . .	66,655	68,650	71,078	73,123	74,861
Widows . . . . .	29,648	30,607	31,892	33,213	39,960
Children . . . . .	6,033	6,494	6,903	7,289	7,559

(a) Includes refunds of contributions to continuing members.  
of the State Superannuation Fund in South Australia.

(b) Includes assets of the Voluntary Savings Scheme

## Schemes operated through life insurance offices

LOCAL GOVERNMENT AND SEMI-GOVERNMENT PENSION AND  
SUPERANNUATION SCHEMES OPERATED THROUGH  
LIFE INSURANCE OFFICES 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Income—</b>					
Contributions—					
Employees . . . . .	\$'000 7,488	8,462	11,158	12,985	11,154
Employing authorities . . . . .	\$'000 9,398	10,866	14,595	17,782	14,967
Contributors at end of year . . . . .	No. 72,252	75,162	83,430	91,429	62,192



## Parliamentary pension and superannuation schemes

Pension and superannuation schemes have been established for members of the Commonwealth and State Parliaments. All the schemes are operated through funds to which the members of Parliament and the Commonwealth or State Governments contribute.

### PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES(a), 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
	\$'000	\$'000	\$'000	\$'000	\$'000
Income—					
Contributions—					
Members . . . . .	468	530	608	657	767
Government . . . . .	621	648	1,084	1,322	1,386
Interest and other income . . . . .	260	326	433	400	456
<b>Total income . . . . .</b>	<b>1,350</b>	<b>1,503</b>	<b>2,125</b>	<b>2,379</b>	<b>2,608</b>
Expenditure—					
Pension payments . . . . .	884	1,046	1,199	1,395	1,599
Other . . . . .	24	68	400	294	259
<b>Total expenditure . . . . .</b>	<b>908</b>	<b>1,114</b>	<b>1,599</b>	<b>1,690</b>	<b>1,858</b>
Assets at end of year—					
Cash—					
Deposits with Treasury . . . . .	81	124	147	86	188
Other deposits and cash . . . . .	44	10	54	34	192
Commonwealth Government securities . . . . .	962	901	947	1,005	1,064
Local government and semi-government securities . . . . .	3,757	3,872	4,083	4,344	4,511
Other assets . . . . .	538	871	1,093	1,522	1,778
<b>Total assets . . . . .</b>	<b>5,382</b>	<b>5,779</b>	<b>6,323</b>	<b>6,991</b>	<b>7,734</b>
<b>Less Sundry creditors, etc. . . . .</b>	<b>17</b>	<b>25</b>	<b>43</b>	<b>21</b>	<b>13</b>
<b>Accumulated funds . . . . .</b>	<b>5,365</b>	<b>5,754</b>	<b>6,280</b>	<b>6,970</b>	<b>7,720</b>
	No.	No.	No.	No.	No.
Contributors at end of year—					
Males . . . . .	645	648	658	656	715
Females . . . . .	12	11	10	9	15
Pensioners at end of year—					
Ex-members . . . . .	253	269	294	304	280
Widows(b) . . . . .	193	202	200	213	215

(a) Includes the Ministerial Retiring Allowances Fund, parliamentary pensions.

(b) Includes children in receipt of Commonwealth Parliamentary pensions.

### Coal and oil-shale mine workers' superannuation schemes

In all States except South Australia superannuation schemes have been established for coal and oil-shale mine workers. These schemes are operated through funds to which mine workers, mine owners and the State Governments contribute.

COAL AND OIL-SHALE MINE WORKERS' SUPERANNUATION SCHEMES(a)  
1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
	\$'000	\$'000	\$'000	\$'000	\$'000
Income—					
Contributions . . . . .	5,671	5,959	6,016	6,664	7,473
Interest, dividends, rent and other income	1,177	1,272	1,369	1,447	1,530
<b>Total income . . . . .</b>	<b>6,848</b>	<b>7,231</b>	<b>7,386</b>	<b>8,111</b>	<b>9,003</b>
Expenditure—					
Pensions and lump sum payments .	5,471	5,289	5,953	7,360	7,987
Other . . . . .	149	170	176	210	330
<b>Total expenditure . . . . .</b>	<b>5,620</b>	<b>5,458</b>	<b>6,129</b>	<b>7,570</b>	<b>8,317</b>
Assets at end of year—					
Local government and semi-government securities . . . . .	21,530	22,943	23,791	24,227	25,074
Other assets . . . . .	1,084	1,285	1,698	1,884	1,688
<b>Total assets . . . . .</b>	<b>22,613</b>	<b>24,228</b>	<b>25,488</b>	<b>26,111</b>	<b>26,761</b>
Less Sundry creditors, statutory reserve funds, etc. . . . .	218	59	64	144	109
<b>Accumulated funds . . . . .</b>	<b>22,395</b>	<b>24,168</b>	<b>25,425</b>	<b>25,967</b>	<b>26,652</b>
	No.	No.	No.	No.	No.
Number of contributions at end of year .	16,116	16,404	17,276	18,697	18,980
Number of pensioners at end of year .	11,884	11,505	11,648	11,770	11,657

(a) Operating in all States except South Australia.

### Private superannuation, pension and retiring allowance schemes

In 1955-56, 1960-61, 1961-62 and 1962-63 the Bureau conducted sample surveys of pension and retiring allowance schemes in private businesses subject to pay-roll tax, other than in rural industries, private domestic service, and certain businesses such as accountants, trade associations, consultant engineers, etc. Commonwealth Government airlines and banks were included where they had established their own funds separately from the Commonwealth superannuation funds, but statutory coal miners' pension funds were excluded. Details were asked for three types of pension and retiring allowance schemes. They were (a) schemes operated through life insurance offices, (b) schemes operated through separately constituted funds, and (c) direct payments of pensions and retiring allowances.

The results of the 1955-56 survey are available in *Finance Bulletin No. 47, Part I—Public and Private Finance*, and the 1960-61, 1961-62 and 1962-63 survey results were published in *Insurance and Other Private Finance, Bulletin No. 2 and Year Book No. 51* (pages 898-900).

For the years 1956-57 to 1958-59, 1963-64 and 1964-65, information was collected from a small number of the larger separately constituted funds. Although only a small number of funds was included in these collections they accounted, in 1962-63, for about 27 per cent of the income, 28 per cent of the expenditure and about 34 per cent of the total assets of the separately constituted funds covered by the more comprehensive sample survey conducted for 1962-63.

Information for these selected funds for the years 1955-56, 1960-61, 1961-62 and 1962-63 was extracted from the returns obtained in the sample surveys conducted for those years and results of the survey for 1964-65, together with comparative figures for previous years, were published in April 1966 in a mimeographed bulletin.

In order to improve the coverage of the published statistics of private pension funds, returns were collected from some additional funds for 1964-65 and tabulated with the returns from the survey for 1964-65 referred to above. The separately constituted private pension funds included in the enlarged 1964-65 survey together accounted, in 1962-63, for about 72 per cent of the total contributions, 71 per cent of the income, 68 per cent of the expenditure and 77 per cent of the assets of the separately constituted funds covered by the more comprehensive sample survey conducted for 1962-63. The results of the enlarged 1964-65 survey were published in September 1966 in a mimeographed bulletin.

Further surveys, relating to the same funds that were included in the enlarged 1964-65 survey, of selected private pension funds, have been made in respect of each year from 1965-66 to 1971-72 inclusive. Since the *Survey of Selected Private Pension Funds* for 1971-72 is not a representative sample it is not known to what extent their share of the whole field has changed since the 1962-63 survey; nor is the pattern of income, expenditure and asset distribution of the large funds included in this survey necessarily representative of the whole field.

The statistics do not relate to uniform accounting periods but to the financial years of the funds which ended in the years shown.

#### SELECTED SEPARATELY CONSTITUTED PRIVATE PENSION FUNDS: INCOME AND EXPENDITURE, 1967-68 TO 1971-72

(\$ million)

INCOME								
		<i>Employees'</i> <i>contributions</i>	<i>Employers'</i> <i>contributions</i>	<i>Interest on</i> <i>Cwlth</i> <i>local and</i> <i>semi-govern-</i> <i>ment</i> <i>securities</i>	<i>Other</i> <i>interest,</i> <i>dividends</i> <i>and rent</i>	<i>Profit from</i> <i>sale or</i> <i>revaluation</i> <i>of assets</i>	<i>Other</i> <i>income(a)</i>	<i>Total</i> <i>income</i>
1967-68	. .	29.4	52.7	20.3	30.8	16.1	6.3	155.6
1968-69	. .	32.3	58.1	21.9	36.0	18.7	7.1	174.1
1969-70	. .	36.2	68.1	23.6	41.6	5.0	3.3	177.8
1970-71	. .	40.9	77.3	26.1	47.1	4.0	3.6	199.0
1971-72	. .	46.7	87.4	29.7	53.3	16.2	9.1	242.3

EXPENDITURE										
Pensions paid			Lump sum payments					Loss on sale or revaluation of assets	Other expenditure (b)	Total expenditure
			To former employees							
Ex-employees	Widows or children	Total	On retirement	On resignation or dismissal	To widows or children	Total				
1967-68	15.3	2.6	17.9	13.1	10.7	2.9	26.7	1.1	3.3	49.0
1968-69	17.0	3.1	20.1	14.7	12.7	3.4	30.8	1.6	3.4	55.9
1969-70	18.7	3.6	22.3	18.1	15.9	3.0	37.0	3.8	8.1	71.2
1970-71	21.3	4.0	25.3	22.4	16.9	3.8	43.1	7.2	5.6	81.3
1971-72	26.4	4.4	30.8	30.6	19.4	4.3	54.3	3.0	5.4	93.4

(a) Includes receipts from life insurance offices, sub-underwriting commissions, etc. expenses payable from funds, payments to life insurance offices, etc.

(b) Includes administrative



**SELECTED SEPARATELY CONSTITUTED PRIVATE PENSION FUNDS: ASSETS(a)**  
**1967-68 TO 1971-72**

	Cash in hand or in bank	Cwltb Govt securi- ties	Local ana semi- govern- ment securi- ties	Loans on mortgage To com- panies	Other	Com- pany debentures, notes, and other loans to com- panies	Shares in com- panies	Land and build- ings	All other assets (b)	Total assets	Less sundry credi- tors, etc.	Amount of funds in Aus- tralia
AMOUNT (\$ million)												
1967-68 .	22.2	155.2	195.0	56.2	26.5	230.0	258.0	8.2	21.5	972.9	4.7	968.3
1968-69 .	23.8	171.3	202.2	70.5	31.1	256.8	299.7	11.4	20.7	1,087.6	6.8	1,080.8
1969-70 .	18.0	193.1	207.0	85.9	37.0	272.9	337.5	16.3	27.1	1,194.7	8.8	1,185.9
1970-71 .	23.1	222.7	207.4	102.0	37.0	290.8	370.7	25.2	32.8	1,311.7	9.0	1,302.7
1971-72 .	33.2	259.9	213.3	100.9	44.3	312.9	418.5	33.3	44.2	1,460.6	9.0	1,451.6

**PERCENTAGE DISTRIBUTION**

1967-68 .	2.3	15.9	20.0	5.8	2.7	23.6	26.5	1.0	2.2	100.0	0.5	99.5
1968-69 .	2.2	15.8	18.6	6.5	2.9	23.6	27.5	1.0	1.9	100.0	0.6	99.4
1969-70 .	1.5	16.2	17.3	7.1	3.1	22.8	28.3	1.4	2.3	100.0	0.7	99.3
1970-71 .	1.8	17.0	15.8	7.8	2.8	22.2	28.2	1.9	2.5	100.0	0.7	99.3
1971-72 .	2.3	17.8	14.6	6.9	3.0	21.4	28.7	2.3	3.0	100.0	0.6	99.4

(a) Book values at balance dates.  
to building societies.

(b) Includes loans to authorised dealers in the short-term money market and loans

**FINANCE COMPANIES**

Information relating to the lending operations of finance companies in Australia is given in the following tables. A comprehensive account of the scope of these statistics and fuller details of the transactions of finance companies, together with definitions of the various categories of finance agreements and of the items of data given in the tables, are provided in the bulletin *Finance Companies Transactions 1971-72* (5.13) and in the monthly statements *Finance Companies* (5.14). For the purposes of these statistics, finance companies are defined as companies which are engaged mainly in providing to the general public (businesses as well as persons in their private capacity) credit facilities of the following types: hire purchase and other instalment credit for retail sales, wholesale hire purchase, other consumer and commercial loans, and factoring. The finance companies covered in these statistics, insofar as they provide instalment credit for retail sales, are also included in the statistics of Instalment Credit for Retail Sales (see pages 530-1).

In general, companies which are engaged both in financing activities and other activities come within the scope of these statistics, provided that the major portion of their assets consists of financial assets of the types listed above and/or a major proportion of their income is derived from such assets. Companies are excluded if the major proportion of their balances outstanding consists of agreements written for the purpose of financing their own sales. Companies which are engaged mainly in financing, in any way, the operations of related companies ('related' as defined in the Companies Act) are also excluded from these statistics, as are unincorporated finance companies. Also excluded are the following classes of financial and quasi-financial institutions: banks; life insurance companies; fire, marine and general insurance companies; short-term money market dealers; pastoral finance companies; investment companies; unit trusts; land trusts; mutual funds and management companies for the foregoing trusts and funds; pension and superannuation funds; building and friendly societies; credit unions.

As from July 1971 the scope of the monthly collection has been altered to exclude all finance companies whose balances outstanding, on an Australia-wide basis, were less than \$500,000. Prior to July 1971 finance companies with balances outstanding of less than \$100,000 were excluded. Finance companies newly excluded from the collection as from July 1971 had, as at 30 June 1971, balances outstanding of less than \$57 million on the types of agreements mentioned above and \$0.7 million on leasing agreements. They had no transactions in bills of exchange.

**FINANCE COMPANIES: SUMMARY, AUSTRALIA, 1967-68 TO 1971-72**  
(\$ million)

<i>Collections and other liquidations</i>					<i>Balances outstanding at end of year</i>		
<i>Amount financed</i>	<i>Contracts including charges</i>	<i>Contracts excluding charges</i>	<i>All contracts</i>	<i>Contracts including charges</i>	<i>Contracts excluding charges</i>	<i>All contracts (a)</i>	
1967-68 . .	2,731.3	1,250.4	1,552.2	2,802.5	1,850.6	593.4	2,444.1
1968-69 . .	3,247.0	1,418.4	1,916.3	3,334.6	2,105.5	723.5	2,829.0
1969-70 . .	3,852.7	1,619.6	2,223.0	3,842.5	2,412.1	1,012.4	3,424.5
1970-71 . .	4,505.3	1,788.3	2,771.4	4,559.7	2,773.4	1,280.4	4,053.9
1971-72 . .	5,512.6	2,020.2	3,449.6	5,469.8	3,077.0	1,821.8	4,898.7

(a) Amounts shown in this column are intended to provide a broad overall measure of total balances outstanding. However, movements in this series may be affected by changes in the proportions of the two components of the series to the total.

**FINANCE COMPANIES: AMOUNT FINANCED, COLLECTIONS AND OTHER LIQUIDATIONS OF BALANCES, AND BALANCES OUTSTANDING BY TYPE OF AGREEMENT, 1967-68 TO 1971-72**  
(\$ million)

	<i>Instal- ment credit for retail sales</i>	<i>Personal loans</i>	<i>Wholesale finance</i>	<i>Factor- ing</i>	<i>Commercial loans repayable at call or within 90 days</i>	<i>Other consumer and commercial loans</i>		<i>Total</i>
						<i>Contracts including charges</i>	<i>Contracts excluding charges</i>	
AMOUNT FINANCED DURING YEAR								
1967-68	.	811.0	122.0	855.8	75.5	371.1	496.0	2,731.3
1968-69	.	914.2	132.1	944.4	75.7	496.9	683.7	3,247.0
1969-70	.	1,037.4	152.4	1,059.7	91.6	572.5	939.1	3,852.7
1970-71	.	1,124.8	162.6	1,134.6	97.6	865.8	1,120.0	4,505.3
1971-72	.	1,121.8	206.4	1,294.0	98.5	1,245.9	1,546.0	5,512.6

**COLLECTIONS AND OTHER LIQUIDATIONS OF BALANCES DURING YEAR**

1967-68	.	908.3	(a)	836.6	83.1	351.7	342.1	280.7	2,802.5
1968-69	.	1,019.7	(a)	934.8	87.9	503.6	398.7	390.0	3,334.6
1969-70	.	1,153.5	(a)	1,053.1	103.6	543.5	466.1	522.7	3,842.5
1970-71	.	1,302.8	174.7	1,127.6	114.4	836.8	335.8	667.5	4,559.7
1971-72	.	1,405.6	199.0	1,268.7	115.4	1,151.9	444.4	884.9	5,469.8

**BALANCES OUTSTANDING AT END OF YEAR**

1967-68	.	1,215.2	(a)	127.6	21.5	64.8	635.4	379.6	2,444.1
1968-69	.	1,368.6	(a)	146.7	22.6	53.9	736.9	500.4	2,829.0
1969-70	.	1,561.5	(a)	167.6	26.9	79.0	850.5	739.0	3,424.5
1970-71	.	1,732.4	218.3	193.4	27.8	108.2	843.96	930.2	4,053.9
1971-72	.	1,791.2	278.4	237.0	25.7	227.4	1,028.1	1,311.0	4,898.7

(a) Before 1970-71 personal loans were included in other consumer and commercial loans.

**FINANCE COMPANIES:  
LEASING, BILLS OF EXCHANGE AND LOANS TO NON-FINANCE COMPANIES  
AUSTRALIA, 1967-68 TO 1971-72  
(\$ million)**

		<i>Leasing of business equipment and plant</i>		<i>Bills of exchange</i>		<i>Balances outstanding at end of period</i>	<i>Loans to non-finance companies in group</i>
		<i>Value of goods newly leased during period</i>	<i>Value of all leasing agreements at end of period</i>	<i>Amounts paid for bills acquired during period</i>	<i>Amounts re- ceived for bills disposed of during period</i>		
1967-68	. .	125.3	191.1	111.1	99.1	16.6	16.0
1968-69	. .	148.7	253.9	122.4	122.4	17.8	20.6
1969-70	. .	207.5	345.9	170.8	154.8	34.7	25.4
1970-71	. .	262.5	459.6	280.8	265.0	51.8	32.0
1971-72	. .	304.1	648.0(a)	346.6	318.5	83.7	30.2

(a) As from July 1971 the valuation is 'gross receivables' and figures have been partly estimated. For more details see explanatory notes to the bulletin *Finance Companies Transactions 1971-72* (Reference No. 5.13).

**FINANCE COMPANIES: INSTALMENT CREDIT FOR RETAIL SALES  
AMOUNT FINANCED, COLLECTIONS AND OTHER LIQUIDATIONS, AND BALANCES  
OUTSTANDING, AUSTRALIA, 1967-68 TO 1971-72  
(\$ million)**

		<i>Amount financed</i>					<i>Collections and other liquidations</i>			<i>Balances out- standing at end of year</i>
		<i>New motor vehicles</i>	<i>Used motor vehicles</i>	<i>Plant and machinery</i>	<i>House- hold and personal goods</i>	<i>Total</i>	<i>Cash col- lections</i>	<i>Other liquida- tions</i>	<i>Total</i>	
1967-68	. .	318.2	296.8	59.0	136.9	811.0	878.3	29.9	908.3	1,215.2
1968-69	. .	352.1	341.5	78.0	142.6	914.2	981.5	38.2	1,019.7	1,368.6
1969-70	. .	400.6	404.1	80.4	152.2	1,037.4	1,103.0	50.5	1,153.5	1,561.5
1970-71	. .	426.5	462.6	67.8	167.8	1,124.8	1,226.9	75.9	1,302.8	1,732.4
1971-72	. .	424.2	466.2	61.6	170.3	1,122.3	1,313.3	91.6	1,404.9	1,791.2



## INSTALMENT CREDIT FOR RETAIL SALES

Information relating to instalment credit for retail sales in Australia is given in the following tables. More detailed information may be found in the annual bulletin *Insurance and Other Private Finance* and in the monthly and quarterly statements relating to instalment credit for retail sales issued by this Bureau (*see* beginning of chapter).

The statistics cover operations of all types of instalment credit schemes which relate primarily to the financing of retail sales of goods, whether the credit is advanced by a retail business or by a non-retail finance business. In general, the term 'instalment credit' is defined as relating to schemes in which repayment is made by regular pre-determined instalments. Types of schemes covered include hire purchase, time payment, budget account, and personal loan schemes which relate primarily to the financing of retail sales of goods. In these statistics the term 'retail sales' relates not only to retail sales by retail establishments coming within the scope of the Censuses of Retail Establishments conducted periodically by this Bureau, but includes also other sales of goods to final purchasers (e.g. plant and machinery).

Figures for amounts financed *exclude* interest, hiring charges, insurance, etc. Figures for balances outstanding and collections *include* interest, hiring charges, insurance, etc. Details are not available of these charges or of other items (e.g. rebates allowed for early payments, late payment charges, bad debts written off) which affect the reconciliation of the three main instalment credit series—amount financed, collections, and balances outstanding.

Statistics of amounts financed are classified by type of goods, defined as follows: *motor vehicles* (new and used separately)—motor cars and motor cycles, commercial vehicles, tractors, caravans, trailers, motor parts and accessories, etc.; *plant and machinery*—farm machinery and implements, earth-moving equipment, aircraft, industrial plant and machinery, business machines and equipment (including commercial refrigeration equipment), etc.; *household and personal goods*—furniture, furnishings and floor coverings, domestic refrigerators, electrical goods, radios, television, musical instruments, bicycles, motor mowers, clothing, etc.

### INSTALMENT CREDIT FOR RETAIL SALES, BY TYPE OF BUSINESS: AMOUNT FINANCED, BY COMMODITY GROUP, CASH COLLECTIONS, AND BALANCES OUTSTANDING, AUSTRALIA, 1967-68 TO 1971-72

(\$ million)

	Amount financed during year					Cash collections during year	Balances out- standing at end of year
	Motor vehicles, etc.		Plant and machinery	House- hold and personal goods	Total		
	New	Used					
Retail businesses—							
1967-68 . . .	12.1	8.8	3.4	266.0	290.3	335.7	337.8
1968-69 . . .	13.5	11.5	3.8	273.0	301.9	347.9	344.8
1969-70 . . .	12.5	9.8	2.6	288.2	313.1	360.7	349.9
1970-71 . . .	13.2	8.8	1.9	304.9	328.8	371.4	363.7
1971-72 . . .	12.6	6.7	1.5	316.1	336.9	384.6	366.9
Non-retail finance businesses—							
1967-68 . . .	339.9	302.9	93.6	87.8	824.2	905.5	1,233.4
1968-69 . . .	373.3	348.4	115.0	88.5	925.2	1,013.9	1,381.7
1969-70 . . .	422.1	413.1	112.7	88.5	1,036.3	1,127.7	1,557.7
1970-71 . . .	447.5	469.2	103.0	90.4	1,110.0	1,245.7	1,712.8
1971-72 . . .	449.7	475.3	92.9	93.4	1,111.3	1,343.8	1,768.4
All businesses—							
1967-68 . . .	352.0	311.7	97.0	353.8	1,114.5	1,241.2	1,571.3
1968-69 . . .	386.8	359.9	118.8	361.6	1,227.1	1,361.8	1,726.5
1969-70 . . .	434.6	422.9	115.3	376.7	1,349.5	1,488.4	1,907.5
1970-71 . . .	460.7	477.9	104.9	395.2	1,438.8	1,617.1	2,076.5
1971-72 . . .	462.3	482.0	94.4	409.5	1,448.2	1,728.4	2,135.3

INSTALMENT CREDIT FOR RETAIL SALES, BY TYPE OF CREDIT  
AMOUNT FINANCED, BY COMMODITY GROUP, AND  
BALANCES OUTSTANDING, AUSTRALIA, 1967-68 TO 1971-72  
(\$ million)

				<i>Amount financed during year</i>			<i>Balances outstanding at end of year</i>	
				<i>Motor vehicles, etc.</i>	<i>Plant and machinery</i>	<i>Household and personal goods</i>		<i>Total</i>
<b>Hire purchase—</b>								
1967-68	.	.	.	431.2	84.3	133.9	649.3	1,026.4
1968-69	.	.	.	463.5	97.8	134.1	695.4	1,078.0
1969-70	.	.	.	526.2	93.7	135.8	755.7	1,159.5
1970-71	.	.	.	604.2	91.7	136.7	832.6	1,261.5
1971-72	.	.	.	656.4	87.8	136.8	881.0	1,333.9
<b>Other instalment credit—</b>								
1967-68	.	.	.	232.6	12.7	219.9	465.2	544.9
1968-69	.	.	.	283.2	21.1	227.5	531.7	648.5
1969-70	.	.	.	331.3	21.6	240.9	593.8	748.1
1970-71	.	.	.	334.5	13.2	258.6	606.3	815.1
1971-72	.	.	.	287.9	6.6	272.7	567.2	801.4
<b>Total instalment credit—</b>								
1967-68	.	.	.	663.7	97.0	353.8	1,114.5	1,571.3
1968-69	.	.	.	746.7	118.8	361.6	1,227.1	1,726.5
1969-70	.	.	.	857.4	115.3	376.7	1,349.5	1,907.5
1970-71	.	.	.	938.6	104.9	395.2	1,438.8	2,076.5
1971-72	.	.	.	944.3	94.4	409.5	1,448.2	2,135.3

NEW HIRE PURCHASE AGREEMENTS: AVERAGE VALUE AND  
AMOUNT AND PROPORTION FINANCED, BY COMMODITY  
GROUP, AUSTRALIA, 1971-72

<i>Commodity group</i>	<i>Average value of goods purchased per agreement</i>	<i>Average amount financed per agreement</i>	<i>Average proportion financed</i>
	\$	\$	Per cent
Motor vehicles, tractors, etc. . . . .	2,253	1,574	70
Plant and machinery . . . . .	3,824	2,661	70
Household and personal goods . . . . .	225	189	84
<b>All groups . . . . .</b>	<b>1,049</b>	<b>752</b>	<b>72</b>

## PASTORAL FINANCE COMPANIES

PASTORAL FINANCE COMPANIES: RURAL ADVANCES  
AMOUNTS OUTSTANDING(a), JUNE 1968 TO 1972

(Source: Reserve Bank of Australia)

(\$ million)

<i>End of June—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A. and Tas.</i>	<i>Total</i>
1968 . . .	72.2	54.8	63.5	61.0	62.9	314.4
1969 . . .	77.6	65.9	62.6	70.2	61.5	337.7
1970 . . .	76.7	66.1	66.8	71.4	68.2	349.1
1971 . . .	70.8	57.2	69.6	73.7	61.7	333.0
1972 . . .	60.6	57.2	57.0	63.3	54.4	292.5

(a) Compiled from returns supplied to the Reserve Bank by major pastoral finance companies. Advances are classified according to the location of the branch holding the advance, which in some cases may differ from the State of residence of the borrower.

## PASTORAL FINANCE COMPANIES: LIABILITIES AND ASSETS(a), JUNE 1968 TO 1972

(Source: Reserve Bank of Australia)

(\$ million)

## LIABILITIES

<i>End of June—</i>	<i>Balances due to banks</i>	<i>Clients' credit balances</i>	<i>Debentures, notes and deposits</i>		<i>Other outside liabilities</i>	<i>Share- holders' funds</i>	<i>Overseas liabilities</i>	<i>Total liabili- ties/ assets</i>
			<i>Maturing within twelve months</i>	<i>Other</i>				
1968 . . .	94.4	34.4	51.9	40.0	89.9	162.5	133.2	606.1
1969 . . .	86.7	37.6	52.7	46.5	107.2	173.4	138.4	642.4
1970 . . .	95.1	34.7	70.6	52.1	113.6	181.1	152.5	699.6
1971 . . .	96.2	31.9	85.3	78.4	122.1	179.6	128.6	722.0
1972 . . .	57.1	35.1	137.6	86.4	150.2	183.3	124.0	773.6

## ASSETS

<i>End of June—</i>	<i>Cash and deposits with banks</i>	<i>Loans to author- ised money market dealers</i>	<i>Other short- term assets (b)</i>	<i>Cwlth Govt securi- ties</i>	<i>Advances and sundry debtors</i>		<i>Stocks</i>	<i>Fixed assets</i>	<i>Other assets</i>
					<i>Rural</i>	<i>Other</i>			
1968 . . .	8.6	1.7	1.3	35.7	314.4	29.9	40.4	148.4	25.7
1969 . . .	11.1	1.6	6.9	35.7	337.7	29.7	40.4	151.6	27.7
1970 . . .	7.9	1.2	17.5	32.6	349.1	36.9	42.5	176.5	35.3
1971 . . .	10.7	3.3	28.8	35.7	333.0	33.9	42.3	190.9	43.3
1972 . . .	10.0	15.0	60.8	65.7	292.5	32.1	48.9	185.3	63.4

(a) Compiled from returns supplied to the Reserve Bank by major pastoral finance companies. (b) Excludes Commonwealth Government securities.



## RURAL DEBT

Major sources of credit for rural purposes include banks, Commonwealth and State government, financial agencies, pastoral finance companies, and life insurance companies. The following table shows the estimated rural debt to these lenders.

## ESTIMATED RURAL DEBT TO SPECIFIED LENDERS, 30 JUNE 1968 TO 1972

(Source: Reserve Bank of Australia)

(\$ million)

Lender	30 June—				
	1968	1969	1970	1971	1972
Major trading banks . . .	918	939	998	994	963
Ex-service settlement . . .	88	83	80	83	79
Other government, including State banks and State savings banks . . .	297	317	(a)351	374	430
Pastoral finance companies . . .	314	338	349	333	293
Commonwealth Development Bank	143	162	176	192	202
Life insurance companies . . .	97	113	128	129	132
<b>Total . . . . .</b>	<b>1,857</b>	<b>1,952</b>	<b>2,082</b>	<b>2,104</b>	<b>2,098</b>

(a) Reserve Bank estimate.

In addition, credit is supplied to the rural sector by finance companies, merchants, co-operative producer organisations, and by private lenders and investors, the most noteworthy of these last-mentioned sources involving family arrangements and property vendors. No data are currently available on the extent of the outstanding debt by the rural sector to these sources.

## NEW CAPITAL RAISINGS BY COMPANIES IN AUSTRALIA

Information relating to capital raised by companies in Australia is given in the following tables. More detailed information may be found in the annual bulletin *Insurance and Other Private Finance* and in quarterly bulletins dealing with capital raisings (see beginning of chapter).

The statistics relate to capital raised by companies through issues of shares, and in the case of companies listed on stock exchanges, through the issue of debentures, notes and similar securities and the acceptance of deposits, and in the case of unlisted companies, by way of loans secured over the entire assets of the company. Capital obtained by way of bank overdraft or bank loans, trade credit, temporary advances, and loans secured over part only of the assets of the company is not included. Totally unsecured loans are included in the case of listed companies, but are excluded in the case of unlisted companies.

Separate statistics are given for listed and unlisted companies. Listed companies are companies incorporated in Australia or Papua New Guinea and listed on one or more of the Australian stock exchanges. All other companies incorporated in Australia (excluding its overseas territories), including subsidiaries of listed companies, are classified as unlisted companies. Companies incorporated overseas, whether listed on an Australian stock exchange or not, are excluded from the statistics of share issues. However, subsidiaries of overseas companies, if incorporated in Australia, are included in the statistics of share issues. The statistics of new capital raised through issues of debentures, notes, etc., and the acceptance of deposits, include, in addition to capital raised by companies incorporated in Australia (including subsidiaries of overseas companies), capital raised in this way from Australian sources by overseas public companies through their Australian offices. Where an issue is made at the same time on Australian and overseas markets, that part of the issue which is taken up through overseas brokers is excluded.

The following are explanatory notes relating to some of the items shown in the tables.

## New money

This is the net amount of cash transferred from the 'investing public' to the 'company sector'. For this purpose the 'investing public' is defined to include all non-company subscribers, Australian life insurance companies and Australian government and private superannuation funds. Subscriptions

by overseas banks, overseas life insurance companies and overseas superannuation funds, are excluded. In practice, it is necessary to include in 'new money', most subscriptions by companies holding less than five per cent of the ordinary shares of an issuing company as it is not practicable to separately identify all such subscriptions. However, where large subscriptions by companies holding less than five per cent of the ordinary shares in the issuing company are identified they are not included in 'new money'.

*Amount not involving new money.* This amount includes cash subscriptions received by issuing companies from associated companies. Such subscriptions represent inter-company transfers only, and do not involve a receipt of funds from the 'investing public'. Also included are amounts which, although subscribed by the 'investing public' (i.e. subscribers other than 'associated companies'), are not retained by the issuing company or its associates, but are used to redeem shares, debentures or unsecured notes, etc., or are used to purchase from individuals existing shares, debentures, etc., in other companies, including existing shares, etc., in associated and subsidiary companies. The funds used in this way are thus returned to another section of the 'investing public' and do not represent a *net* transfer of cash from the 'investing public' to the companies. (Besides these purchases of existing shares, etc., from individuals, purchases of existing shares, etc., from companies other than associates of the issuing company might also be included in this item, but the amounts involved are small and separate details have not been collected.) In the tables which follow, the 'amount not involving new money' is obtained by deducting from the total cash raised the amount of 'new money'.

**LISTED COMPANIES: NEW CAPITAL RAISED THROUGH ISSUES OF SHARES  
DEBENTURES, OR REGISTERED NOTES, ETC (a), OR ACCEPTING  
DEPOSITS(b), 1967-68 TO 1971-72**  
(\$ million)

Share capital						Debentures, registered notes and deposits			
	Value of issues commenced	Non-cash issues commenced (c)	Cash issues commenced	Cash raised during period (d)	Amount not involving new money	New money	Total amount raised (e)	Amount not involving new money (e)	New money
1967-68 . . .	281.0	79.3	201.8	170.1	47.2	122.9	1,393.9	1,045.2	348.7
1968-69 . . .	927.2	209.9	717.3	482.2	143.7	338.5	1,838.4	1,389.5	449.1
1969-70 . . .	1,070.0	282.8	787.2	664.5	207.6	456.8	2,567.2	2,085.7	481.5
1970-71 . . .	991.7	446.3	545.4	456.4	93.4	361.2	3,193.1	2,676.7	516.4
1971-72 . . .	655.4	398.8	256.5	342.2	87.3	255.0	3,650.3	2,925.5	724.9

(a) Includes convertible notes. (b) Deposits accepted by banks, life insurance companies, pastoral companies and building societies, and loans to authorised dealers in the short-term money market are not included. (c) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc. (d) Amounts paid up on issues commenced during the year plus calls on issues commenced in earlier years. (e) Includes conversions, renewals, etc.

**UNLISTED COMPANIES: NEW CAPITAL RAISED THROUGH ISSUE OF  
SHARES AND LOANS SECURED BY CHARGES OVER THE COMPANIES'  
ENTIRE ASSETS, 1967-68 TO 1971-72**  
(\$ million)

Share capital						Loans secured by charges over the companies' entire assets			
	Value of issues commenced(a)	Non-cash issues commenced (b)	Cash issues commenced	Cash raised during period (c)	Amount not involving new money	New money	Total amount raised (d)	Amount not involving new money (d)	New money
1967-68 . . .	400.1	190.9	209.1	209.2	158.4	50.8	66.3	48.2	18.1
1968-69 . . .	718.8	343.8	375.3	299.0	230.5	68.4	95.3	62.8	32.5
1969-70 . . .	809.1	290.9	518.2	454.5	374.9	79.5	95.0	75.4	19.6
1970-71 . . .	721.6	233.1	488.6	460.2	389.3	70.9	85.1	66.5	18.7
1971-72 . . .	783.7	353.1	430.6	469.5	403.8	65.6	127.1	95.2	31.9

(a) From 1970-71, issues with a nominal value of \$200 or less are excluded. (b) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc. (c) Amounts paid up on issues commenced during year plus calls on issues commenced in previous years. (d) Includes conversion, renewals, etc.

**LISTED AND UNLISTED COMPANIES: NEW MONEY RAISED, BY INDUSTRY  
GROUP, 1967-68 TO 1971-72**  
(\$ million)

<i>Companies listed on stock exchanges</i>										<i>Companies not listed on stock exchanges</i>				<i>Grand total</i>			
<i>Share capital(a)</i>										<i>Deben- tures registered notes and deposits(b)</i>		<i>Total</i>	<i>Share capital(a)</i>		<i>Secured loans(c)</i>	<i>Total</i>	
<b>Manufacturing—</b>																	
1967-68	.	.	.	24.7	82.4	107.1	12.7	7.8	20.5	127.6							
1968-69	.	.	.	92.9	68.3	161.2	14.4	6.3	20.7	181.9							
1969-70	.	.	.	122.9	56.2	179.1	12.7	3.3	16.0	195.1							
1970-71	.	.	.	72.6	33.3	105.9	12.1	0.7	12.8	118.7							
1971-72	.	.	.	31.1	122.6	153.7	11.5	5.7	17.2	170.9							
<b>Finance and property(b)—</b>																	
1967-68	.	.	.	15.6	255.4	271.0	8.1	6.2	14.3	285.3							
1968-69	.	.	.	45.9	338.1	384.0	18.9	6.4	25.3	409.3							
1969-70	.	.	.	36.7	366.7	403.4	20.9	10.2	31.1	434.5							
1970-71	.	.	.	35.8	424.3	462.8	11.8	9.2	21.0	483.8							
1971-72	.	.	.	42.3	563.1	605.4	13.1	19.4	32.5	637.9							
<b>Commerce—</b>																	
1967-68	.	.	.	7.9	4.3	12.2	8.9	0.8	9.7	21.9							
1968-69	.	.	.	18.4	30.7	49.1	10.1	2.3	12.4	61.5							
1969-70	.	.	.	8.9	13.8	22.7	8.4	0.9	9.3	32.0							
1970-71	.	.	.	5.2	29.3	34.5	5.4	0.8	6.2	40.7							
1971-72	.	.	.	12.3	36.3	48.6	5.6	0.3	5.9	54.5							
<b>Other industries—</b>																	
1967-68	.	.	.	75.0	6.6	81.6	17.6	3.4	21.0	102.6							
1968-69	.	.	.	181.5	12.0	193.5	21.5	17.3	38.8	232.3							
1969-70	.	.	.	288.4	44.8	333.2	33.0	5.3	38.3	371.5							
1970-71	.	.	.	244.9	29.6	274.5	35.4	8.2	43.6	318.1							
1971-72	.	.	.	169.3	2.9	172.2	26.5	6.4	32.9	205.1							
<b>All industries—</b>																	
1967-68	.	.	.	122.9	348.7	471.6	(e)	(e)	(e)								
1968-69	.	.	.	338.5	449.1	787.6	50.8	18.1	68.9	540.5							
1969-70	.	.	.	456.8	481.5	938.3	68.4	32.5	100.9	888.5							
1970-71	.	.	.	361.2	516.4	877.6	79.5	19.6	99.1	1,037.4							
1971-72	.	.	.	255.0	724.9	979.9	70.9	18.7	89.6	967.2							
							65.6	31.9	97.5	1,077.2							

(a) Includes preference shares. (b) Excludes deposits accepted by banks, insurance companies, pastoral companies and building societies, and loans to authorised dealers in the short-term money market. (c) Includes only loans which are secured by charges over the companies' entire assets. (d) Excess of repayments over receipts of new money. (e) Up to 1969-70, the industry figures for unlisted companies exclude share issues with a nominal value of \$2,000 or less, but such issues are included in the All Industries figures. From 1970-71 the industry figures for unlisted companies exclude issues with a nominal value of \$10,000 or less, and issues with a nominal value of \$200 or less are excluded from the All Industries figures.

## SHORT-TERM MONEY MARKET

For some years prior to 1959 leading stockbrokers had been actively engaged in the acceptance of short-term funds against the security of government securities, but their operations were limited by the absence of suitable short-term securities and their liquidity requirements. In February 1959 the Commonwealth Bank (now the Reserve Bank) gave official status to the market by announcing that under certain conditions it would act as lender of last resort to authorised dealers in the short-term money market.

The form of organisation consists of nine companies whose functions are:

- (i) to accept loans overnight, at call or for fixed periods, in minimum amounts of \$50,000 and to invest these funds in money market securities.
- (ii) to engage as traders in the buying and selling of money market securities.



The types of securities that may be used as money market securities are subject to the approval of the Reserve Bank. At present they comprise Commonwealth Government securities maturing within five years, commercial bills of any maturity that have been accepted or endorsed by a trading bank, banks' certificates of deposit maturing within five years, and non-bank commercial bills maturing within 180 days.

Dealers are required to have a minimum paid-up capital of \$400,000 and there is a limit on the maximum ratio of loans to shareholders' funds.

Under the lender of last resort arrangements dealers may borrow from the Reserve Bank for a minimum of seven days and at a high rate of interest against the lodgment of Commonwealth Government securities.

### SHORT-TERM MONEY MARKET: SELECTED LIABILITIES AND ASSETS AND INTEREST RATES OF AUTHORISED DEALERS, JUNE 1968 TO 1972

(Source: Reserve Bank of Australia)

Month	Liabilities to clients			Holdings of Cwlth Govt securities (at face value)	Com- mercial bills	Bank's certifi- cates of deposit	Interest rates <sup>a</sup> on loans accepted during month				Weighted average interest rate on loans out- standing (a) per cent per annum
	All trading banks	Other clients	Total				At call		For fixed periods		
							Mini- mum per cent per annum	Maxi- mum per cent per annum	Mini- mum per cent per annum	Maxi- mum per cent per annum	
Average of weekly figures—(\$ million)											
June—											
1968 .	87.7	406.5	494.2	491.3	35.7	..	3.00	6.75	3.75	5.40	4.29
1969 .	94.9	398.7	493.6	505.6	28.9	15.0	2.00	7.50	4.00	6.75	4.59
1970 .	102.8	464.2	567.0	575.4	38.3	3.6	3.50	8.80	4.50	8.50	6.12
1971 .	142.0	555.2	697.2	682.0	45.4	3.4	2.00	9.50	4.00	8.00	5.91
1972 .	249.8	741.5	991.3	975.0	39.8	20.8	2.00	8.25	4.25	6.60	5.18

(a) Average of weekly figures.

### SHORT-TERM MONEY MARKET: AUTHORISED DEALERS' LIABILITIES BY TYPE OF CLIENT(a), 30 JUNE 1968 TO 1972

(Source: Reserve Bank of Australia)

(\$ million)

Client	30 June—				
	1968	1969	1970	1971	1972
All trading banks . . . . .	17.6	90.0	158.4	189.2	369.3
Savings banks . . . . .	26.5	36.0	37.3	77.7	69.0
Insurance offices . . . . .	20.1	32.4	24.4	26.8	44.8
Superannuation, pension and provident funds . . . . .	4.6	8.9	16.6	22.4	19.3
Hire purchase and other instalment credit companies . . . . .	2.8	2.4	7.9	6.1	11.7
Companies, n.e.i. . . . .	156.8	140.3	143.7	155.3	253.3
Commonwealth and State Governments . . . . .	78.1	62.3	47.7	91.9	100.3
Local government and semi-government authorities, n.e.i. . . . .	72.2	75.3	87.7	70.0	99.8
All other lenders(b). . . . .	20.6	45.9	36.2	41.5	71.1
<b>Total . . . . .</b>	<b>499.3</b>	<b>493.4</b>	<b>559.9</b>	<b>680.8</b>	<b>1,038.7</b>

(a) Compiled from returns supplied by authorised dealers in the short-term money market. Liabilities to Reserve Bank as lender of last resort are excluded. (b) Includes marketing boards and trustee companies.

## UNIT TRUSTS, LAND TRUSTS AND MUTUAL FUNDS

Statistics of operations of unit trusts, land trusts and mutual funds for the years 1967-68 to 1971-72 are shown below. Details of superannuation funds conducted by unit trust management companies are not included in these tables.

TRUSTS AND FUNDS: TOTAL MARKET VALUE AND TRANSACTIONS  
YEARS 1967-68 TO 1971-72

(\$ million)

	<i>Total market value at end of period(a)</i>	<i>Cash transactions— trust units and fund shares</i>		<i>Purchases and sales of investments(b)</i>	
		<i>Total amount received(c)</i>	<i>Total amount paid(d)</i>	<i>Purchases (e)</i>	<i>Sales (f)</i>
1967-68 . .	263.4	30.9	35.1	33.0	40.8
1968-69 . .	270.2	41.6	42.0	48.2	54.6
1969-70 . .	286.1	59.0	32.3	61.1	50.8
1970-71 . .	278.6	56.5	39.3	74.5	51.5
1971-72 . .	326.9	57.9	33.6	78.3	47.0

(a) Includes value of land trusts at valuation. (b) Commonwealth Government, local authority and semi-government securities, shares, debentures, unsecured notes, loans, deposits on term or notice of three months or longer, land and buildings, etc. (c) For trust units and fund shares issued. Includes re-issues and new issues. Includes fees and expenses. (d) For trust units and fund shares repurchased. Includes those units and fund shares intended for re-issue. (e) Payments for assets acquired during period. Includes brokerage and stamp duty. (f) Receipts for assets sold or redeemed during period. Excludes brokerage and stamp duty.

TRUSTS AND FUNDS: ANALYSIS OF PURCHASES AND SALES OF  
INVESTMENTS, 1967-68 TO 1971-72

(\$ million)

	<i>Shares (incl. preference shares)</i>	<i>Debentures, unsecured notes, deposits (a)</i>	<i>Land, buildings, mortgages</i>	<i>Other(b)</i>	<i>Total</i>
<b>Purchases—</b>					
1967-68 . .	13.2	7.3	12.3	0.1	33.0
1968-69 . .	17.0	11.6	19.6	0.1	48.2
1969-70 . .	35.3	10.6	14.9	0.3	61.1
1970-71 . .	39.2	10.6	24.6	..	74.5
1971-72 . .	17.2	14.3	42.9	3.9	78.3
<b>Sales—</b>					
1967-68 . .	34.7	3.8	2.1	0.2	40.8
1968-69 . .	44.0	5.5	3.5	1.6	54.6
1969-70 . .	37.9	6.4	5.5	1.1	50.8
1970-71 . .	35.8	8.3	5.1	2.3	51.5
1971-72 . .	30.9	7.9	7.6	0.5	47.0

(a) Excludes cash on hand and at bank, loans to authorised dealers in the short-term money market, and other deposits under three months' term or notice. (b) Includes Commonwealth, local and semi-government securities.

## REGISTERED BUILDING SOCIETIES

## Permanent and terminating building societies

REGISTERED BUILDING SOCIETIES: SELECTED ITEMS(a)  
AUSTRALIA, 1966-67 TO 1970-71

<i>Societies making returns</i>							<i>Adminis- trative expenses</i>
<i>Permanent</i>	<i>Terminating (b)</i>		<i>Total</i>	<i>Share- holders</i>	<i>Loans paid over</i>		
	No.	No.	No.	No.	\$'000	\$'000	
1966-67 . . . .	144	4,058	4,202	402,557	194,653	11,154	
1967-68 . . . .	161	4,388	4,549	458,881	260,011	13,060	
1968-69 . . . .	173	4,641	4,814	535,173	331,850	16,503	
1969-70 . . . .	182	4,883	5,065	669,371	444,263	21,500	
1970-71 . . . .	189	5,240	5,429	862,617	453,038	27,139	

(a) At various balance dates within the financial year shown. (b) Co-operative housing and other terminating societies.

REGISTERED BUILDING SOCIETIES: LIABILITIES AND ASSETS(a)  
AUSTRALIA, 1966-67 TO 1970-71  
(\$'000)

<i>Liabilities</i>					<i>Assets</i>				
<i>Investing members' funds</i>	<i>Borrowing members' funds</i>	<i>Deposits</i>	<i>Loans due to governments</i>	<i>Other liabilities</i>	<i>Total liabilities</i>	<i>Advances on mortgages(b)</i>	<i>Other assets</i>	<i>Total assets</i>	
1966-67 . . .	291,766	175,243	55,529	225,399	417,509	1,165,446	1,111,354	54,092	1,165,446
1967-68 . . .	394,806	178,242	72,395	257,638	441,742	1,344,823	1,266,294	78,528	1,344,823
1968-69 . . .	548,619	185,623	126,114	283,716	454,129	1,598,204	1,490,259	107,945	1,598,204
1969-70 . . .	812,688	174,676	156,849	312,909	475,198	1,932,322	1,776,761	155,561	1,932,322
1970-71 . . .	1,132,556	165,747	195,776	348,959	457,272	2,300,311	2,038,305	262,005	2,300,311

(a) At various balance dates within the financial year shown. (b) Includes advances on mortgages of terminating societies which are mainly on a gross basis. Net advances may be derived by subtracting 'Borrowing members' funds'.

## Permanent building societies

The following statistics summarise information obtained from a monthly collection introduced in May 1969 and relate to the operations of permanent building societies in all States and the Australian Capital Territory and the Northern Territory.

PERMANENT BUILDING SOCIETIES: 1968-69 TO 1971-72  
(\$'000)

	<i>Loans approved during year(a)</i>	<i>Loans advanced during year(b)</i>	<i>Loans approved but not advanced at end of year(c)</i>	<i>Principal owing on mortgages at end of year</i>	<i>Paid-up share-capital at end of year</i>	<i>Borrowings by societies—amount owing at end of year(d)</i>
1968-69 . . .	n.a.	n.a.	75,940	706,966	553,650	221,971
1969-70 . . .	379,051	375,535	58,354	993,539	799,470	277,659
1970-71 . . .	428,628	368,733	100,285	1,246,167	1,120,150	322,627
1971-72 . . .	689,323	616,349	150,421	1,702,549	1,624,697	414,223

(a) Includes loans approved for flats and home units, supplementary loans approved to complete the original purchase or construction of a house, flat or home unit and second mortgage loans approved. (b) Includes capitalised mortgage insurance premiums and other capitalised charges. (c) Excludes cancellations of loan approvals. (d) Includes deposits with societies, advances under Commonwealth and State Housing Agreements but excludes unsecured borrowings from banks.



## FRIENDLY SOCIETIES AND CO-OPERATIVE SOCIETIES

## Friendly societies

In 1971 the total membership of friendly societies in Australia was about 435,000, but as certain benefits such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must be more than doubled to arrive at an estimate of the number of persons who receive some direct benefit from these societies, even when due allowances are made for young and unmarried members. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules conform to the law, and that the scale of contribution is sufficient to provide the promised benefits. Societies are obliged to forward to the Registrar annual returns about their membership and their finances, and reports dealing with the returns received are published in most of the States.

## FRIENDLY SOCIETIES(a): SUMMARY, STATES, 1970-71

	N.S.W.(b)	Vic.	Qld	S.A.	W.A.	Tas.(c)	Total
Registered societies . . . .	39	123	17	14	11	9	213
Branches . . . . .	1,641	1,075	381	481	246	110	3,934
Benefit members at end of year .	153,104	148,823	62,898	50,488	14,841	4,709	434,863
Average benefit members during year . . . . .	149,724	150,005	63,005	50,642	15,058	4,763	433,197
Members who received sick pay .	n.a.	n.a.	5,518	7,480	1,945	631	n.a.
Total weeks sick pay granted .	n.a.	370,555	96,982	141,994	48,633	18,015	n.a.
Average sick weeks per member .	n.a.	n.a.	17.6	19.0	25.0	28.6	n.a.
Deaths of benefit members . . .	n.a.	2,439	1,240	1,079	297	212	n.a.
Proportion of deaths per 1,000 members (average) . . . .	n.a.	16.3	19.7	21.3	19.7	44.5	n.a.
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Revenue—							
Entrance fees, levies and members' contributions .	23,579	17,449	4,727	9,993	2,946	64	58,759
Interest, dividends and rents .	1,952	2,682	669	1,110	192	83	9,349
All other revenue . . . .	676	461		1,237	260	25	
Total revenue . . . .	26,208	20,592	5,396	12,341	3,399	173	68,108
Expenditure—							
Sick pay . . . . .	621	580	124	181	38	17	1,561
Medical attendance and medicine	18,232	14,366	3,364	8,368	2,660	2	46,993
Sums payable at death . . .	690	262	216	151	44	41	1,404
Administration . . . .	3,845	3,379	955	1,483	228	44	12,939
All other expenditure . . .	873	1,444		550	114	26	
Total expenditure . . .	24,263	20,031	4,659	10,733	3,082	129	62,897
Total funds . . . . .	35,458	48,647	11,482	20,962	4,411	1,458	122,418

(a) Excludes juvenile branches, dispensaries, medical institutes, and certain miscellaneous societies. Receipts and payments of subsidy under the Commonwealth medical and hospital benefit schemes are excluded. (b) Includes the Australian Capital Territory. (c) Year ended 31 December 1971.

## Co-operative societies

Co-operative societies are divided into three classes: (i) those engaged in the manufacture and marketing of primary products and trade requirements; (ii) those engaged in retailing general household requirements; and (iii) those engaged in activities covered by both classes (i) and (ii). The first class may be described briefly as producers' co-operative societies and the second as consumers' co-operative societies. The particulars given for New South Wales relate to societies registered under the Co-operation Act, 1923-1967. A summary of the business of all co-operative societies for the year 1970-71 for all States is given in the following table. Separate particulars for each of the three types of co-operative societies are given in the annual bulletin *Insurance and Other Private Finance*, and issue No. 7, 1969-70, contains details for 1967-68 and 1968-69.

## CO-OPERATIVE SOCIETIES: STATES, 1970-71

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Societies . . . No.	340	150	404	63	66	17	1,040
Members . . . No.	383,299	156,269	161,292	124,021	66,062	6,434	897,377
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Income—							
Gross turnover (sales) .	390,452	173,738	193,634	64,059	79,544	11,063	912,490
Other income . . .	3,563	7,399	12,644	5,029	22,512	1,256	52,403
Total income . . .	394,015	181,137	206,278	69,088	102,056	12,319	964,893
Expenditure—							
Other purchases . . . }	385,401 {	126,014	146,522	47,620	70,022	9,278	930,655
Other expenditure . . }		46,803	44,102	21,329	30,598	2,966	
Total expenditure . .	385,401	172,818	190,623	68,949	100,620	12,244	930,655
Rebates and bonuses . .	4,546	1,884	4,666	2,467	3,258	n.a.	n.a.
Dividends on share capital	1,237	1,712	942	514	816	74	5,295
Liabilities—							
Paid-up capital . . .	42,871	26,583	30,254	8,800	13,111	1,248	122,867
Bank overdrafts . . .	51,140	19,012	18,639	7,753	11,605	(a)	(a)
Accumulated profits . . }	25,765 {	3,157	8,521	1,177	80	546	118,885
Reserve funds . . . }		26,508	33,946	9,015	9,485	685	
Loan capital . . . . }		9,322	25,465	15,433	54,691	(a)	(a)
Sundry creditors . . }	76,369 {	24,293	28,436	5,630	14,883	2,041	
Other liabilities . . . }		6,597	11,386	11,288	5,010	2,740	
Total liabilities . . .	196,145	115,472	156,647	59,097	108,865	7,260	643,485
Assets—							
Land and buildings . . }	76,345 {	52,131	74,374 {	13,813	9,531	1,501	292,286
Machinery, plant and other fixed assets . . }				10,032	53,904	655	
Stocks . . . . .	64,812	17,988	14,816	16,959	7,899	1,224	123,699
Sundry debtors . . .	38,375	32,875	56,469	9,146	28,869	2,920	168,653
Cash in hand and on deposit . . . . . }	16,612 {	3,080	4,117	987	1,947	281	58,847
Profit and loss account . . }		3,194	751	362	211		
Other assets . . . . }		6,204	6,119	7,797	6,502	681	
Total assets . . . .	196,145	115,472	156,647	59,097	108,865	7,260	643,485

(a) Not available for publication, included in total liabilities.

# LOTTERIES AND BETTING

## Lotteries

The State Governments of New South Wales, Queensland, South Australia and Western Australia operate lotteries in their own States. Tattersall Sweep Consultations are operated under government licence in Victoria and also sell tickets under government licence in Tasmania and New Zealand. Tickets for any of these lotteries may also be sold in the Northern Territory and the Australian Capital Territory. The statistics of sales of tickets and prizes include the sales and allotments of prizes in New Zealand, Tasmania, the Northern Territory and the Australian Capital Territory. In general, revenue derived by the State Governments from these lotteries is used directly or indirectly to provide funds for expenditure on hospitals, charities, etc.

### LOTTERIES: VALUE OF TICKET SALES, PRIZES ALLOTTED, TAXES PAID AND OTHER NET CONTRIBUTIONS TO STATE GOVERNMENT REVENUES 1967-68 TO 1971-72

(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Total
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#### TICKET SALES

1967-68 . . .	50,528	19,420	15,900	5,200	4,350	95,398
1968-69 . . .	53,335	19,440	16,680	5,350	5,150	99,955
1969-70 . . .	55,645	21,400	17,600	5,700	6,200	106,545
1970-71 . . .	58,057	21,360	18,560	6,000	6,250	110,227
1971-72 . . .	62,389	21,388	20,510	6,200	7,400	117,887

#### PRIZES ALLOTTED

1967-68 . . .	30,850	11,652	10,151	3,129	2,493	58,275
1968-69 . . .	32,843	11,664	10,651	3,241	3,001	61,400
1969-70 . . .	34,052	12,840	11,237	3,460	3,757	65,346
1970-71 . . .	35,815	12,816	11,851	3,648	3,803	67,932
1971-72 . . .	38,284	12,833	13,122	3,775	4,506	72,519

#### TAXES PAID AND OTHER NET CONTRIBUTIONS TO STATE GOVERNMENT REVENUES(a)

1967-68 . . .	11,809	6,020	4,006	1,726	1,236	24,798
1968-69 . . .	12,202	6,026	4,160	1,633	1,437	25,458
1969-70 . . .	12,712	6,634	4,358	1,927	1,643	27,274
1970-71 . . .	13,127	6,622	4,492	1,833	1,594	27,667
1971-72 . . .	13,655	6,630	4,910	1,979	1,935	29,109

(a) Includes grants to Tasmanians and New Zealand governments by Tattersall Sweep Consultations, Victoria.



**Betting**

**TOTALISATOR INVESTMENTS AND INVESTMENTS WITH LICENSED BOOKMAKERS  
STATES AND AUSTRALIAN CAPITAL TERRITORY, 1967-68 TO 1971-72  
(\$'000)**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(a)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Total</i>
<b>TOTALISATOR INVESTMENTS</b>								
1967-68	196,120	200,253	55,330	20,030	46,180	1,277	3,098	522,288
1968-69	241,350	224,955	61,003	26,292	52,938	1,145	4,215	611,897
1969-70	292,442	245,993	81,771	31,679	60,913	1,250	7,092	721,141
1970-71	334,814	273,638	94,534	38,403	67,652	1,322	8,808	819,172
1971-72	394,620	329,142	115,312	47,281	82,543	1,453	10,723	981,074
<b>INVESTMENTS WITH LICENSED BOOKMAKERS(b)</b>								
1967-68	283,262	172,603	131,145	49,189	27,332	42,090	3,919	709,540
1968-69	282,497	172,388	141,167	50,263	32,189	41,705	4,127	724,335
1969-70	310,881	183,296	145,837	58,165	38,972	44,899	4,713	786,763
1970-71	314,658	196,166	147,931	60,728	39,778	48,825	5,232	813,318
1971-72	345,770	217,898	158,652	73,544	41,840	52,871	6,805	897,381

(a) Totalisator Agency Board commenced operating on 29 March 1967.  
censed bookmakers in all States except Australian Capital Territory.

(b) Estimated from taxes on betting with

**PROBATES AND LETTERS OF ADMINISTRATION**

The following table gives some particulars of the number and value of estates of deceased persons in each State for the latest year for which information is available. Owing to differences in legislation in the various States the figures are not entirely comparable.

**PROBATES AND LETTERS OF ADMINISTRATION: STATES**

	<i>N.S.W. 1971-72(a)</i>	<i>Vic. 1971</i>	<i>Qld 1971-72</i>	<i>S.A. 1971</i>	<i>W.A. 1971-72</i>	<i>Tas. 1971(b)</i>
Estates . . . . . No.	27,080	21,421	9,844	5,864	4,935	1,792
Gross value . . . . . \$'000	n.a.	426,079	183,481	100,044	87,924	34,391
Net value . . . . . \$'000	517,193	381,610	166,726	93,032	81,027	31,067

(a) Total estates of deceased persons assessed for death duty.

(b) Estates dealt with by the Taxation Department.

## AUSTRALIAN INDUSTRY DEVELOPMENT CORPORATION

The Australian Industry Development Corporation was established by the *Australian Industry Development Corporation Act* 1970 and commenced operations on 1 February 1971. Within the objectives and broad policy guidelines defined in the Act the Corporation operates as an independent commercial enterprise governed by its own Board of Directors.

The Corporation has a capital of \$100 million, to be subscribed by the Australian Government in instalments but the whole being available if required to meet obligations. The paid-up capital at 30 June 1973 was \$50 million.

The central objectives of the Corporation are to promote the development of industries in Australia and support local participation in the ownership and control of industries and resources. Consistent with these objectives and the principle that A.I.D.C. must operate on a commercial basis and assist only in ventures which can demonstrate sound prospects, the Corporation provides finance, obtained principally by overseas borrowings, for essentially Australian-owned firms (including local firms with foreign partners) engaged in new development or expansion in the manufacturing, processing and mining industries.

The Corporation's financial participation in a venture is governed by the prevailing terms and conditions under which it can itself obtain loan finance. The capital of the Corporation is provided as a base for its borrowings and is not directly used for assistance to industry projects.

The Corporation participates in the financing of a development only at the invitation of the enterprise concerned and in the manner dictated by the needs of the project. Its assistance may be given in a variety of ways, such as loan investments or guarantees, or by temporarily taking a minority equity position.

As at 30 June 1973, the end of A.I.D.C.'s second year of operations, the Corporation had undertaken financial commitments totalling \$114 million in respect of 60 industry development ventures.





## CHAPTER 18

### PUBLIC FINANCE

This chapter deals with the financial activities of the organisations which make up the three levels of government in the Australian political system—Commonwealth, State and Local—and which collectively constitute the public sector. The chapter is organised into seven main groupings of topics. An account is given of the activities of each level of government, with particular emphasis being given to Commonwealth authorities. Tables are then presented which bring together the transactions of all public authorities to highlight the role of the public sector as a whole in the Australian economy. Then follows a section on government borrowing activities at all levels; and a section which looks at some major groups of State authorities that have been created to provide specific services, such as roads, water supply, etc.

For further detailed information on the subjects covered by this chapter see the annual bulletins published by this Bureau: *Australian National Accounts—National Income and Expenditure* (7.1); *Public Authority Finance—Commonwealth Authorities* (5.12); and *Commonwealth Taxation Assessments* (5.29). Additional information may be found in *Public Authority Finance* (5.33), and in the mimeographed bulletins *Public Authority Finance—State and Local Authorities* (5.43) and *Public Authority Finance—Taxation* (5.30). Current information in summarised form is given in *Quarterly Estimates of National Income and Expenditure* (7.5), and is also contained in *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), and the *Monthly Digest of Current Economic Statistics* (1.5).

Additional details of the transactions of public authorities engaged in particular fields of activity, such as defence, transport and communication, health and welfare, education, etc. may be found in other chapters of this Year Book.

### COMMONWEALTH FINANCE

#### Financial provisions of the Constitution

The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Sections 81 to 105A of the Commonwealth Constitution (see pages 16–19 of this Year Book). Two other sections which have a most important bearing on questions of Commonwealth finance are sections 69 and 51.

Section 69 provides for the transfer from the States to the Commonwealth of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments. Sections 87 and 96 deal with the financial relations between the Commonwealth and the States. The full text of the Financial Agreement of 1927 was given in Year Book No. 31, page 21; accounts of this Agreement as affected by subsequent Agreements were included in later issues of the Year Book up to No. 37 (see pages 685–90); details of the main provisions appeared in further issues of the Year Book up to No. 50 (see pages 952–3). Details of current provisions for financial assistance to the States are given on pages 557 to 565.

The *Audit Act* 1901–1969 lays down the procedure which must be followed in accounting for the receipt and disbursement of public funds. The general administration of Commonwealth finances is the responsibility of the Treasurer of the Commonwealth.

### Commonwealth Budget

The Commonwealth Budget records the transactions of those Commonwealth authorities whose receipts and payments are summarised in the statements of Treasury balances. In 1971-72 the change in cash balances was represented by the following—

	\$'000
Cash receipts of the Consolidated Revenue Fund . . . . .	8,688,105
plus cash receipts of Loan Fund . . . . .	1,258,988
plus cash receipts of Trust Fund . . . . .	4,484,173
<i>Total</i> . . . . .	<i>14,431,266</i>
less cash payments from Consolidated Revenue Fund . . . . .	8,688,105
less cash payments from Loan Fund . . . . .	1,258,988
less cash payments from Trust Fund (including increase in investments of the Trust Fund) . . . . .	3,916,504
<i>Total</i> . . . . .	<i>13,863,597</i>
<i>equals increase in cash balances</i> . . . . .	<i>567,669</i>

Revenues from taxation and other sources are paid into the Consolidated Revenue Fund, from which the main expenditures are for defence, social services, payments to the States and general administration. The Trust Fund covers special transactions outside the ordinary operations of departmental expenditures, such as pension funds and moneys held for expenditure by the Commonwealth at some future time. The Loan Fund receives its funds from the sale of Commonwealth securities, and the expenditures from the Fund are made in accordance with the purpose of issue of each loan. The main disbursements from the Loan Fund are to the States by way of distribution of the proceeds of loans raised by the Commonwealth on their behalf and capital assistance grants, the remaining disbursements being mainly for Commonwealth purposes such as defence or war service land settlement.

The receipts and outlay of the Commonwealth Budget for 1972-73 are set out in the table which follows, together with figures for the years 1968-69 to 1971-72. The national accounting presentation of the budget is shown in order to be consistent with other transactions figures given in this chapter.

It should be noted that some transactions undertaken by authorities covered by the Budget are not reflected in the change in cash balances, usually because they are not cash transactions or because a receipt and a payment are offset against each other so that only a net amount is included in published totals. The national accounting presentation of the Budget includes these additional transactions, further details of which may be found in the Appendix to the Supplement to the *Treasury Information Bulletin*, August 1970.

RECEIPTS AND OUTLAY OF COMMONWEALTH BUDGET, 1968-69 TO 1972-73 (ESTIMATED)  
(\$ million)

(Source: Supplement to the *Treasury Information Bulletin*, August 1972)

	1968-69	1969-70	1970-71	1971-72	1972-73 Budget Estimate
<b>Outlay—</b>					
Net expenditure on goods and services—					
Current . . . . .	1,781	1,812	1,976	2,179	2,407
Capital(a) . . . . .	180	187	224	222	249
Total . . . . .	1,962	1,998	2,200	2,401	2,656
Transfer payments—					
Cash benefits to persons . . . . .	1,406	1,598	1,771	2,055	2,417
Grants to States . . . . .	1,419	1,620	2,207	2,373	2,716
Interest paid . . . . .	502	546	576	616	649
Transfers overseas . . . . .	159	180	185	205	234
Subsidies . . . . .	261	247	309	382	338
Grants for private capital purposes . . . . .	32	34	37	43	56
Total . . . . .	3,779	4,224	5,084	5,674	6,410
Total expenditure . . . . .	5,741	6,222	7,284	8,075	9,066
Net advances—					
States . . . . .	625	667	520	587	644
Commonwealth authorities . . . . .	235	271	340	375	387
Other sectors . . . . .	31	36	47	64	66
Total . . . . .	891	974	907	1,025	1,096
Total outlay . . . . .	6,633	7,195	8,190	9,101	10,162
<b>Receipts—</b>					
Taxation—					
Indirect taxes . . . . .	2,035	2,244	2,502	2,525	2,620
Income tax on companies . . . . .	1,039	1,197	1,444	1,535	1,564
Income tax on persons . . . . .	2,377	2,855	3,175	3,765	4,204
Estate and gift duties . . . . .	70	80	78	76	75
Other direct taxes, fees, fines, etc. . . . .	43	46	47	58	63
Total . . . . .	5,564	6,422	7,245	7,959	8,526
Other receipts—					
Interest, rent and dividends . . . . .	642	711	800	885	938
Public enterprises income . . . . .	50	52	60	62	65
Net sales of existing assets(b) . . . . .	-7	3	11	8	2
Total . . . . .	685	766	870	954	1,005
Total receipts . . . . .	6,248	7,188	8,115	8,914	9,531
<b>Deficit . . . . .</b>	<b>385</b>	<b>7</b>	<b>75</b>	<b>187</b>	<b>630</b>

(a) Expenditure on new fixed assets *plus* increase in stocks *less* sales of previously rented houses.  
of previously rented houses.

(b) Excludes sales

### Financing of the Commonwealth deficit

The deficit shown in the last line of the preceding table represents the net excess of Budget outlay over receipts. In other words, the estimated deficit shown for 1972-73 represents the Commonwealth budget sector's 'financing requirements,' and the actual deficits shown for earlier years represents the net outcome of the financing transactions of the budget sub-sector. Most such transactions involve the issue, repurchase, redemption or acquisition of Commonwealth securities, but some involve or are represented by changes in other assets or liabilities of the Commonwealth.



Specifically the deficit is financed as follows.

Net sales of Commonwealth securities (new issues, *less* redemptions, *less* net purchases from Commonwealth balances in the Trust Fund);

*less* net purchases of other investments from Commonwealth balances in the Trust Fund *plus* minor items of indebtedness (such as borrowing by Australian Capital Territory and Northern Territory housing trust accounts)

*less* net additions to cash balances, and funds provided for the International Monetary Fund and the Australian Wheat Board.

The following table summarises the financing transactions of the Commonwealth budget sector for the years 1967-68 to 1971-72. Further details of Commonwealth loan transactions and of government securities on issue on account of the Commonwealth and the States are given in a later section of this Chapter.

### COMMONWEALTH FINANCING TRANSACTIONS, 1967-68 TO 1971-72

(\$ million)

(Source: Statement No. 7 attached to the *Budget Speech*, 1972-73)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Overseas—</b>					
Credit arrangements for defence purchases in the United States of America . . . . .	132.1	91.2	51.1	63.8	46.2
Less—repayments . . . . .	14.1	36.6	53.7	57.2	62.6
Net drawings . . . . .	118.0	54.6	-2.5	6.6	-16.4
Aircraft loans for Qantas and Australian National Airlines Commission . . . . .	64.8	14.6	11.3	47.1	84.5
Less—repayments . . . . .	15.8	27.0	27.2	27.6	32.6
Net drawings . . . . .	49.0	-12.4	-15.9	19.5	52.0
Other overseas loan proceeds . . . . .	77.0	168.5	48.0	14.8	26.2
Less—redemptions, etc. . . . .	111.6	68.5	160.4	86.5	108.8
Net proceeds . . . . .	-34.8	100.0	-112.4	-71.7	-82.6
<i>Total net proceeds overseas</i> . . . . .	132.2	142.2	-130.9	-45.6	-47.1
<b>Funds provided for International Monetary Fund</b>	-58.8	-5.0	..	-36.8	..
<b>Australia—</b>					
Proceeds of loans raised in Australia . . . . .	589.4	615.7	677.6	770.1	917.4
Less—redemptions, etc. . . . .	292.6	234.9	414.3	565.5	197.1
Net proceeds of loans raised in Australia . . . . .	296.8	380.8	263.3	204.6	720.3
Net change in Treasury Notes on issue . . . . .	183.6	-68.3	46.5	17.9	-9.7
480.4	312.5	309.8	222.4	710.5	
Net advance to the Australian Wheat Board . . . . .	..	..	-184.0	65.3	53.2
480.4	312.5	125.8	287.7	763.7	
Other financing transactions . . . . .	37.4	62.4	45.1	27.4	37.7
<b>Residual Financing—</b>					
Net increase in Treasury Bills on issue . . . . .	51.0	-127.0	-14.0	..	..
Use of cash balances . . . . .	0.2	0.2	-19.4	-157.4	-567.4
<i>Total residual financing</i> . . . . .	51.2	-126.8	-33.4	-157.4	-567.4
<i>Total Australian financing transactions</i> . . . . .	569.0	248.1	137.6	157.7	234.0
<b>Total financing transactions</b> . . . . .	642.4	385.3	6.8	75.3	186.9

### COMMONWEALTH AUTHORITIES

In addition to the group of Commonwealth authorities whose transactions are covered by the Budget (i.e. itemised in the Consolidated Revenue Fund or recorded in a Trust Fund), there are a number of organisations owned or controlled by the Commonwealth whose transactions do not, for the most part, pass through the Public Account. This category consists largely of public enterprises such as the Post Office, Qantas, Trans-Australia Airlines, the Overseas Telecommunications Commission, the Australian Coastal Shipping Commission, the Snowy Mountains Hydro-electric Authority, the Reserve Bank and the Commonwealth Banking Corporation. Public enterprises, it should be noted,

are bodies which aim at covering the bulk of their expenses by revenue either from sales of goods and services (trading enterprises), or by charges for services and net interest receipts (financial enterprises). As well as these enterprises, there are other public authorities which record most of their transactions outside the Public Account but have only minor independent sources of revenue, and are financed almost entirely from funds voted to them each year from the Consolidated Revenue Fund. In order that the national accounting presentation may indicate as completely as possible the direct effect of the budget on demand, appropriations to this group of authorities are treated as final expenditure in the Budget. Authorities in this category include the Australian Broadcasting Commission, Australian National University, National Capital Development Commission, and the Australian Atomic Energy Commission.

The transactions of Commonwealth bodies not covered by the Budget may be brought together and consolidated with the transactions recorded in the Budget to yield figures of the transactions of all Commonwealth authorities. The remaining tables in this section have been prepared on that basis. These tables for all Commonwealth authorities exclude borrowing and the corresponding advances in respect of State works programmes: borrowing by the Commonwealth on behalf of the States is treated as borrowing by the States, and recorded in the table of receipts and outlay of State authorities given in the next section.

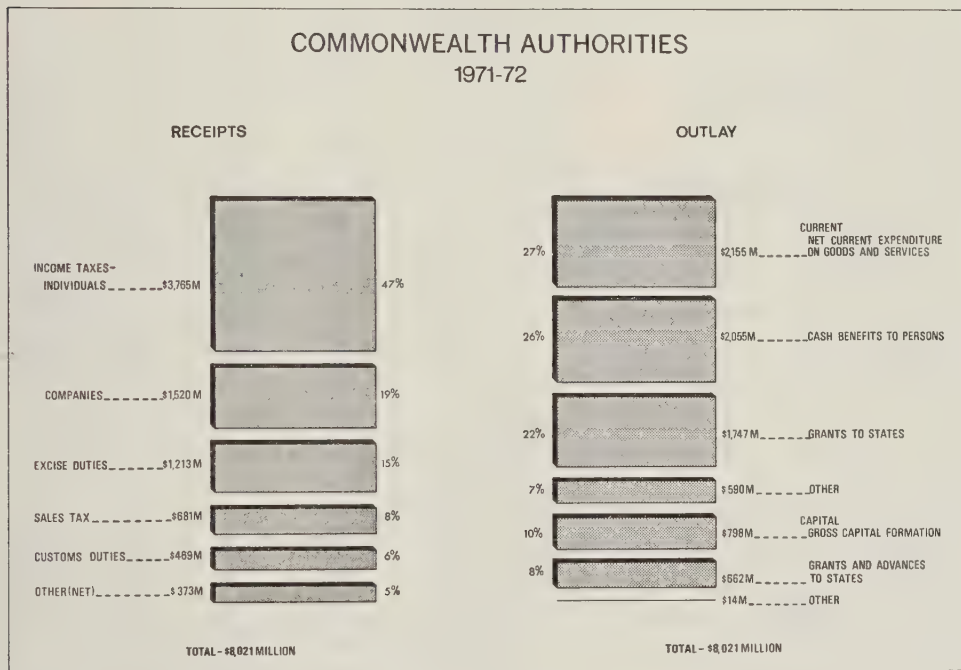


PLATE 34

**Summary of receipts and outlay**

The receipts and outlay of all Commonwealth authorities for the five year period ended 1971-72 are given in the following table.

**COMMONWEALTH AUTHORITIES(a): RECEIPTS AND OUTLAY, 1967-68 TO 1971-72**  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>RECEIPTS</b>					
Current receipts—					
Taxes, fees, fines, etc. . . . .	4,951	5,527	6,378	7,181	7,937
Income from public enterprises . . . . .	149	195	208	235	288
Interest, etc., received . . . . .	47	50	56	65	60
<i>Total current receipts . . . . .</i>	<i>5,146</i>	<i>5,772</i>	<i>6,642</i>	<i>7,481</i>	<i>8,284</i>
Capital receipts—					
Depreciation allowances . . . . .	137	158	178	193	210
Net sale of securities—					
Commonwealth securities—					
Australia . . . . .	—6	—365	—283	—167	143
Overseas . . . . .	209	166	—42	6	—19
Public corporation securities . . . . .	1	..	12	—10	—1
Other funds available (including errors and omissions) . . . . .	44	37	108	13	—22
<i>Total capital receipts . . . . .</i>	<i>385</i>	<i>—4</i>	<i>—27</i>	<i>36</i>	<i>310</i>
Reduction in cash and bank balances . . . . .	—2	—16	—33	—101	—574
<b>Total receipts . . . . .</b>	<b>5,530</b>	<b>5,752</b>	<b>6,582</b>	<b>7,417</b>	<b>8,021</b>
<b>OUTLAY</b>					
Current outlay—					
Net current expenditure on goods and services	1,607	1,720	1,786	1,990	2,155
Interest, etc., paid . . . . .	34	26	23	12	—14
Cash benefits to persons . . . . .	1,294	1,406	1,598	1,772	2,055
Subsidies . . . . .	179	207	241	262	356
Transfers overseas . . . . .	154	159	180	185	205
Grants for private capital purposes . . . . .	58	32	34	37	43
Grants to States . . . . .	1,057	1,155	1,309	1,652	1,747
<i>Total current outlay . . . . .</i>	<i>4,382</i>	<i>4,706</i>	<i>5,170</i>	<i>5,909</i>	<i>6,547</i>
Capital outlay—					
Expenditure on new fixed assets . . . . .	569	565	651	703	832
Expenditure on existing assets . . . . .	6	8	—1	—7	—1
Increase in stocks . . . . .	—3	—3	—2	47	—33
Advances to other sectors . . . . .	152	99	276	58	14
Grants to States . . . . .	255	264	311	554	626
Advances to States . . . . .	170	113	176	151	36
<i>Total capital outlay . . . . .</i>	<i>1,148</i>	<i>1,045</i>	<i>1,412</i>	<i>1,507</i>	<i>1,474</i>
<b>Total outlay . . . . .</b>	<b>5,530</b>	<b>5,752</b>	<b>6,582</b>	<b>7,417</b>	<b>8,021</b>

(a) Excluding financial enterprises.



**Outlay classified by economic type and function**

In the following two tables the outlay of all Commonwealth authorities is shown in terms of a functional classification. The table on this page presents for 1971-72 the outlay under each functional head classified by economic type, highlighting the government's own demand for goods and services and the redistributive effect of its outlays. Current and capital outlay under each functional head are shown for the years 1967-68 to 1971-72 on page 552.

**COMMONWEALTH AUTHORITIES(a): TOTAL OUTLAY, BY ECONOMIC TYPE  
AND FUNCTION, 1971-72**

(\$ million)

CURRENT OUTLAY							
	<i>Expen- diture on goods and services</i>	<i>Cash benefits</i>	<i>Sub- sidies</i>	<i>Trans- fers over- seas</i>	<i>Current Grants to States</i>	<i>Grants for private capital pur- poses</i>	<i>Total</i>
Law, order and public safety . . . . .	25	..	..	..	..	..	26
Education . . . . .	67	53	..	1	120	1	243
Cultural and recreational facilities . . . . .	88	..	..	1	..	..	89
Health . . . . .	53	517	..	1	1	..	572
Welfare . . . . .	43	1,213	..	..	28	21	1,305
Defence . . . . .	1,114	..	..	22	..	..	1,136
Repatriation . . . . .	108	263	..	..	..	2	373
Development of resources and assistance to industry . . . . .	198	1	356	2	10	..	566
Transport and communication . . . . .	55	..	..	8	..	..	63
General administration and legislature . . . . .	250	..	..	1	..	..	251
Foreign affairs . . . . .	41	..	..	58	..	..	99
Immigration . . . . .	51	5	..	1	..	..	57
Regulation of trade and industry . . . . .	23	2	..	..	..	..	25
Housing . . . . .	7	..	..	..	4	18	29
Other . . . . .	2	..	..	108	..	1	112
Not allocated to function . . . . .	30	..	..	..	1,584	..	(b) 1,600
<b>Total . . . . .</b>	<b>2,155</b>	<b>2,055</b>	<b>356</b>	<b>205</b>	<b>1,747</b>	<b>43</b>	<b>6,547</b>

**CAPITAL OUTLAY**

	<i>Expen- diture on new assets</i>	<i>Expen- diture on existing assets and stocks</i>	<i>Capital grants to States</i>	<i>Advances to States</i>	<i>Advances to other sectors</i>	<i>Total</i>
Education . . . . .	24	..	86	..	..	110
Cultural and recreational facilities . . . . .	14	..	..	..	..	14
Health . . . . .	19	..	6	..	..	25
Defence . . . . .	..	3	..	..	22	25
Development of resources and assistance to industry . . . . .	32	-40	42	26	-54	6
Transport and communication—						
Post office . . . . .	403	9	..	..	..	412
Civil aviation . . . . .	184	13	..	..	-29	168
Roads . . . . .	29	..	255	-1	..	284
Other . . . . .	46	-2	3	1	..	49
Power, fuel and light . . . . .	26	..	..	3	..	29
Housing . . . . .	7	-18	6	-10	46	30
Other . . . . .	50	..	9	18	..	97
Not allocated to function . . . . .	..	..	219	-1	29	226
<b>Total . . . . .</b>	<b>832</b>	<b>-34</b>	<b>626</b>	<b>36</b>	<b>14</b>	<b>1,474</b>

(a) Excluding financial enterprises. (b) Including interest.

**COMMONWEALTH AUTHORITIES(a): TOTAL OUTLAY, BY FUNCTION  
1967-68 TO 1971-72**

(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>CURRENT OUTLAY</b>					
Law, order and public safety . . . . .	13	14	17	21	26
Education . . . . .	109	124	158	211	244
Cultural and recreational facilities . . . . .	57	64	74	80	89
Health . . . . .	291	324	382	465	572
Welfare . . . . .	828	891	1,027	1,115	1,305
Defence . . . . .	1,010	1,036	1,014	1,092	1,136
Repatriation . . . . .	275	301	315	330	373
Development of resources and assistance to industry . . . . .	363	371	419	464	566
Transport and communication . . . . .	38	41	46	54	63
General administration and legislature . . . . .	145	158	182	219	252
Foreign affairs . . . . .	61	67	75	84	99
Immigration . . . . .	44	59	65	66	57
Regulation of trade and industry . . . . .	15	15	17	19	25
Housing . . . . .	18	18	18	22	29
Other . . . . .	87	91	101	106	112
Not allocated to function . . . . .	1,028	1,133	1,260	1,563	1,599
<b>Total current outlay . . . . .</b>	<b>4,382</b>	<b>4,706</b>	<b>5,170</b>	<b>5,909</b>	<b>6,547</b>
<b>CAPITAL OUTLAY</b>					
Education . . . . .	67	68	88	94	110
Cultural and recreational facilities . . . . .	11	10	10	11	14
Health . . . . .	8	9	11	19	25
Defence . . . . .	59	67	30	-1	25
Development of resources and assistance to industry . . . . .	67	35	223	80	6
Transport and communication— Post office . . . . .	267	305	349	375	412
Civil aviation . . . . .	110	59	91	120	168
Roads . . . . .	185	199	222	257	284
Other . . . . .	67	58	75	38	49
Power, fuel and light . . . . .	50	39	51	41	29
Housing . . . . .	152	159	171	182	30
Other . . . . .	31	48	42	49	97
Not allocated to function . . . . .	74	-11	49	243	226
<b>Total capital outlay . . . . .</b>	<b>1,148</b>	<b>1,045</b>	<b>1,412</b>	<b>1,507</b>	<b>1,474</b>
<b>TOTAL OUTLAY</b>					
<b>Total outlay . . . . .</b>	<b>5,530</b>	<b>5,752</b>	<b>6,582</b>	<b>7,417</b>	<b>8,021</b>

(a) Excluding financial enterprises.

### Main components of outlay

The following tables give further details of the main components of the outlay of Commonwealth authorities, i.e. expenditure on goods and services, cash benefits, subsidies and payments to the States. More detailed information relating to outlay under specific function headings such as defence, education, health and welfare, may be found in the relevant chapters of this Year Book.

#### *Expenditure on goods and services*

Expenditure on goods and services by Commonwealth authorities (i.e. the demand by these authorities for the output of the producing sectors of the economy) consists essentially of purchases of goods and services for current consumption *less* any charges made by the authorities for goods and services which they themselves provide, together with expenditure on the acquisition of new fixed assets and existing assets (net of any sales of assets) and any change in stocks. The following tables show functional dissections of net current expenditure on goods and services and expenditure on new fixed assets for the five years ended 1971-72.

#### COMMONWEALTH AUTHORITIES: NET CURRENT EXPENDITURE ON GOODS AND SERVICES: CLASSIFIED BY FUNCTION, 1967-68 TO 1971-72

(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Law, order and public safety . . . . .	12	14	17	20	25
Education . . . . .	30	36	41	59	67
Cultural and recreational facilities . . . . .	56	63	73	79	88
Health . . . . .	26	30	35	44	53
Welfare . . . . .	22	25	31	36	43
Defence . . . . .	984	1,017	989	1,073	1,114
Repatriation . . . . .	71	76	83	92	108
Development of resources and assistance to industry . . . . .	133	147	162	183	198
Transport and communication . . . . .	33	35	40	45	55
Power, fuel and light . . . . .	1	1	1	1	1
Legislature . . . . .	12	12	14	17	17
General administration . . . . .	130	143	167	199	233
Foreign affairs . . . . .	23	26	31	35	41
Immigration . . . . .	38	53	59	60	51
Regulation of trade and industry . . . . .	12	13	14	17	23
Housing . . . . .	5	5	6	6	7
Other . . . . .	1	2	3	3	1
Not allocated to function . . . . .	17	22	19	20	30
<b>Grand total . . . . .</b>	<b>1,607</b>	<b>1,720</b>	<b>1,786</b>	<b>1,990</b>	<b>2,155</b>



## COMMONWEALTH AUTHORITIES: EXPENDITURE ON NEW FIXED ASSETS CLASSIFIED BY FUNCTION, 1967-1968 TO 1971-72

(\$ million)

Function	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Public enterprises—</b>					
Development of resources and assistance to industry—					
Water supply, sewerage, etc. . . . .	12	8	10	13	18
Other . . . . .	..	..	..	..	..
Total development, etc. . . . .	12	8	10	13	18
Manufacturing . . . . .	..	1	1	1	1
Transport and communication—					
Post office . . . . .	265	301	342	370	403
Railways. . . . .	16	9	10	13	16
Other . . . . .	90	42	73	62	171
Total transport, etc. . . . .	370	352	425	444	590
Power, fuel and light . . . . .	44	36	42	39	26
Housing . . . . .	13	19	17	15	5
Public financial enterprises . . . . .	16	14	15	14	22
Other. . . . .	..	..	..	..	..
Total public enterprises . . . . .	455	430	511	526	663
<b>General government—</b>					
Law, order and public safety . . . . .	1	2	1	2	3
Education . . . . .	13	13	17	20	24
Cultural and recreational facilities. . . . .	12	10	9	11	14
Health . . . . .	3	3	4	13	19
Welfare . . . . .	2	2	2	4	2
Repatriation . . . . .	3	3	3	5	3
Development of resources and assistance to industry—other . . . . .	12	13	15	17	13
Transport and communication—					
Civil aviation . . . . .	29	36	39	50	38
Roads . . . . .	20	23	23	30	29
Other . . . . .	1	2	2	2	5
Total transport, etc. . . . .	50	62	65	82	72
Housing . . . . .	1	1	1	2	2
Other. . . . .	28	35	31	31	32
Not allocated to function . . . . .	3	5	7	4	8
Total general government . . . . .	129	149	155	191	190
<b>Grand total . . . . .</b>	<b>584</b>	<b>579</b>	<b>666</b>	<b>718</b>	<b>853</b>

## Cash benefits to persons

Total payments of cash benefits to persons during the years 1967-68 to 1971-72 are shown in the next table. Further information relating to items in this table is given in the appropriate chapter of this Year Book, and figures of cash benefits paid to persons in each State and Territory may be found in *Public Authority Finance: Commonwealth Authorities*.

**COMMONWEALTH AUTHORITIES: CASH BENEFITS TO PERSONS 1967-68 TO 1971-72**  
 (\$'000)

<i>Type of benefit</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
<b>Education—</b>					
Commonwealth scholarship scheme—					
Post-graduate . . . . .	2,899	3,588	4,526	5,209	5,888
University . . . . .	13,383	16,268	18,160	22,519	28,127
Advanced education . . . . .	754	1,001	1,628	2,793	3,552
Secondary . . . . .	6,474	6,558	6,738	6,791	6,924
Technical . . . . .	1,031	1,123	1,162	1,096	1,048
Soldiers' children education scheme . . . . .	2,720	3,154	3,203	3,407	3,625
Aboriginal study grants . . . . .	..	62	190	326	473
Aboriginal secondary grants . . . . .	..	..	522	2,201	2,536
Other . . . . .	717	753	829	994	1,221
<i>Total education . . . . .</i>	<i>27,979</i>	<i>32,508</i>	<i>36,959</i>	<i>45,337</i>	<i>53,393</i>
<b>Health—</b>					
Hospital benefits . . . . .	26,598	29,779	40,258	49,812	67,305
Hospital benefits for pensioners . . . . .	23,665	24,520	24,163	23,555	24,065
Nursing home benefits . . . . .	24,486	31,643	46,960	49,477	70,593
Medical benefits . . . . .	46,431	49,556	56,863	95,604	132,574
Medical benefits for pensioners . . . . .	16,116	16,912	19,224	19,898	27,804
Milk for school children . . . . .	9,831	10,053	10,051	10,160	11,845
Pharmaceutical benefits . . . . .	73,019	81,764	95,650	115,094	121,263
Pharmaceutical benefits for pensioners . . . . .	32,115	36,609	41,069	45,181	52,005
Tuberculosis campaign . . . . .	11,266	11,460	10,554	10,597	9,596
Handicapped children's benefit . . . . .	..	76	485	456	438
<i>Total health . . . . .</i>	<i>263,529</i>	<i>292,373</i>	<i>345,277</i>	<i>419,835</i>	<i>517,488</i>
<b>Welfare—</b>					
Age and invalid pensions . . . . .	513,984	558,587	641,982	702,276	818,516
Child endowment . . . . .	187,920	193,263	220,121	198,442	216,609
Commonwealth rehabilitation service . . . . .	1,944	2,260	2,758	3,646	3,945
Funeral benefits . . . . .	1,338	1,571	1,512	1,653	1,583
Maternity allowances . . . . .	7,349	7,960	8,000	8,554	8,617
Tuberculosis campaign—allowances . . . . .	1,091	921	771	659	630
Unemployment benefits, sickness and special benefits . . . . .	18,832	16,830	18,592	23,478	44,754
Widows' pensions . . . . .	61,061	69,080	81,753	90,514	105,283
Sheltered employment allowances . . . . .	104	288	436	590	742
Deserted wives benefits . . . . .	201	1,149	1,882	3,691	5,876
Personal care . . . . .	..	..	1,133	1,592	1,830
Delivered meals . . . . .	..	..	196	341	338
Emergency assistance to woolgrowers . . . . .	..	..	..	21,327	187
Other . . . . .	2,273	3,058	2,991	3,950	4,167
<i>Total welfare . . . . .</i>	<i>796,098</i>	<i>854,966</i>	<i>982,125</i>	<i>1,060,713</i>	<i>1,213,077</i>
<b>Development of resources and assistance to industry—</b>					
Wool research studentships . . . . .	270	360	341	368	388
<b>Repatriation—</b>					
War and service pensions and allowances . . . . .	196,219	216,958	223,366	234,979	260,295
Other . . . . .	1,954	1,981	2,192	2,453	2,832
<i>Total repatriation . . . . .</i>	<i>198,173</i>	<i>218,939</i>	<i>225,557</i>	<i>237,431</i>	<i>263,127</i>
<b>Immigration—</b>					
Maintenance of migrant families . . . . .	4,460	4,277	4,623	4,925	4,298
Other . . . . .	345	656	681	731	602
<i>Total immigration . . . . .</i>	<i>4,805</i>	<i>4,933</i>	<i>5,304</i>	<i>5,656</i>	<i>4,900</i>
<b>Regulation of trade and industry—</b>					
Coal mining industry—long service leave . . . . .	918	892	985	1,062	1,241
Stevedoring industry—attendance money, etc. . . . .	2,196	1,410	1,141	1,140	1,213
<i>Total regulation of trade, etc. . . . .</i>	<i>3,114</i>	<i>2,302</i>	<i>2,127</i>	<i>2,202</i>	<i>2,454</i>
<b>Housing—</b>					
Commonwealth-State Housing Agreement—					
Contribution to rental losses . . . . .	44	60	74	131	151
<b>Grand total . . . . .</b>	<b>1,294,011</b>	<b>1,406,441</b>	<b>1,597,765</b>	<b>1,771,673</b>	<b>2,054,978</b>

## Subsidies

The following table shows details of Commonwealth outlay on subsidies and bounties for the years 1967-68 to 1971-72. Other assistance to primary producers is included in, for example, tables relating to cash benefits and payments to the States, and additional information is given in Chapter 22, Rural Industry.

## COMMONWEALTH AUTHORITIES: SUBSIDIES 1967-68 TO 1971-72

(\$'000)

Type of subsidy	1967-68	1968-69	1969-70	1970-71	1971-72
Dairy industry . . . . .	27,000	27,000	27,000	41,500	39,882
Wheat prices stabilisation . . . . .	15,508	42,870	..	29,008	58,357
Phosphate fertilisers . . . . .	23,564	31,665	45,820	40,815	45,795
Oil search . . . . .	11,552	12,333	14,298	9,643	7,572
Nitrogenous fertilisers . . . . .	10,308	11,044	9,876	9,716	9,757
Gold mining industry . . . . .	4,302	1,737	1,812	2,828	1,992
Pyrites . . . . .	..	..	..	568	1,205
Cotton . . . . .	4,027	4,620	3,531	2,973	795
Processed milk products . . . . .	743	638	516	2,729	2,052
Sulphate of ammonia . . . . .	565	430	1,081	538	-2
Vinyl resin . . . . .	12	..	..	..	..
Sulphuric acid . . . . .	1,286	988	740	489	896
Agricultural tractor . . . . .	2,480	2,249	1,757	2,750	3,160
Cellulose acetate flake . . . . .	220	179	276	200	166
Poultry industry assistance . . . . .	10,418	10,920	11,349	12,505	13,420
Urea . . . . .	163	424	496	449	..
Devaluation compensation . . . . .	..	35,627	30,069	21,600	7,227
Book bounty . . . . .	..	..	1,374	3,217	3,181
Industrial and development research grants . . . . .	654	5,300	8,915	16,250	13,000
Ship construction . . . . .	11,605	12,551	18,758	18,646	12,692
Dried vine fruits stabilisation . . . . .	..	..	1,240	1,161	276
Wool marketing—Assistance . . . . .	..	..	..	2,900	4,100
Wool Commission . . . . .	..	..	..	1,040	..
Deficiency payments for wool . . . . .	..	..	..	..	52,802
Northern Territory—					
Coastal shipping service . . . . .	39	24	27	12	36
Petrol prices . . . . .	991	1,316	1,742	2,092	2,165
Railway freight . . . . .	100	113	87	114	80
Superphosphate sea subsidy . . . . .	43	23	50	55	200
Transport of stud stock . . . . .	80	175	245	129	100
Drought relief freight concessions . . . . .	50	2	239	149	210
Air services . . . . .	1,901	1,780	1,800	2,000	1,900
Coastal shipping service—King Island . . . . .	150	141	150	160	143
South American shipping service . . . . .	300	180	157	113	38
Petrol prices stabilisation . . . . .	16,578	17,948	20,625	21,737	23,064
Stevedoring industry . . . . .	6,190	9,053	9,323	12,289	14,892
Apple and pear stabilisation . . . . .	..	..	..	..	2,584
Export incentive . . . . .	..	..	..	..	(a)50,674
Other . . . . .	400	68	..	10	..
Adjustment to payable basis . . . . .	27,361	-24,346	27,538	1,800	-18,300
<b>Total . . . . .</b>	<b>178,590</b>	<b>207,053</b>	<b>240,892</b>	<b>262,185</b>	<b>356,111</b>

(a) Offset against gross receipts of pay-roll tax prior to 1971-72.



**Grants and advances to the States**

Commonwealth financial assistance to the States takes two main forms: (i) direct financial assistance in the form of grants for general and specific purposes, and (ii) assistance for developmental and other specific purposes in the form of repayable advances. Some information about the more important or most recent of these forms of financial assistance is given on pages 557-65, but for more complete information reference should be made to the Commonwealth Budget paper *Commonwealth Payments to or for the States*. Further information also appears in chapters of this Year Book dealing with the specific function which the payments are designed to serve.

**Grants to the States**

The following tables show details of grants to the States for general and specific purposes. More detailed figures appear in *Public Authority Finance: Commonwealth Authorities*.

**COMMONWEALTH AUTHORITIES: GRANTS TO THE STATES, BY FUNCTION, 1971-72**  
**(\$'000)**

<i>Function</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>CURRENT GRANTS</b>							
Specific purpose—							
Education . . . . .	43,612	36,842	15,255	10,842	9,911	3,788	120,250
Health . . . . .	231	6	170	77	93	7	584
Welfare . . . . .	10,811	6,239	5,760	1,786	2,138	1,508	28,243
Housing . . . . .	1,368	1,005	315	623	457	232	4,000
Development of resources and assistance to industry . . . . .	2,711	2,064	2,897	828	781	440	9,721
Other functions . . . . .	-370	..	..	..	..	..	-370
Not allocated to function—							
Payments under Financial Agreement . . . . .	14,507	10,632	5,623	4,866	3,505	2,359	41,492
Debt charges assistance . . . . .	7,600	5,568	3,051	2,991	2,211	1,590	23,008
<i>Total specific . . . . .</i>	<i>80,470</i>	<i>62,356</i>	<i>33,071</i>	<i>22,013</i>	<i>19,096</i>	<i>9,924</i>	<i>226,928</i>
General purpose—							
Financial assistance grants . . . . .	462,204	348,464	231,603	158,491	170,960	69,156	1,440,878
Special grants . . . . .	..	..	9,000	7,000	..	7,800	23,800
Special revenue assistance . . . . .	18,313	13,621	8,606	5,929	6,014	2,517	55,000
<i>Total general . . . . .</i>	<i>480,517</i>	<i>362,085</i>	<i>249,209</i>	<i>171,420</i>	<i>176,974</i>	<i>79,473</i>	<i>1,519,678</i>
<i>Total current . . . . .</i>	<i>560,987</i>	<i>424,439</i>	<i>282,280</i>	<i>193,433</i>	<i>196,070</i>	<i>89,397</i>	<i>1,746,606</i>
<b>CAPITAL GRANTS</b>							
Specific purpose—							
Education . . . . .	29,517	24,086	11,535	8,565	7,935	4,331	85,969
Health . . . . .	1,446	1,081	1,958	482	882	279	6,127
Welfare . . . . .	3,460	2,254	772	1,092	804	243	8,624
Development of resources and assistance to industry . . . . .	8,673	2,924	20,075	2,513	7,127	823	42,133
Transport and communication . . . . .	74,500	49,820	53,574	26,627	41,694	12,094	258,309
Other functions . . . . .	1,714	280	1,933	342	1,268	35	5,572
<i>Total specific . . . . .</i>	<i>119,310</i>	<i>80,445</i>	<i>89,847</i>	<i>39,621</i>	<i>59,710</i>	<i>17,805</i>	<i>406,734</i>
General purpose—							
Capital assistance grants . . . . .	69,690	55,890	27,710	30,030	20,470	15,310	219,100
<i>Total capital . . . . .</i>	<i>189,000</i>	<i>136,335</i>	<i>117,557</i>	<i>69,651</i>	<i>80,180</i>	<i>33,115</i>	<i>625,834</i>

**COMMONWEALTH AUTHORITIES: GRANTS TO THE STATES, BY FUNCTION**  
**1967-68 TO 1971-72**  
(\$'000)

<i>Function</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
<b>CURRENT GRANTS</b>					
Specific purpose—					
Education . . . . .	48,338	52,846	77,005	103,316	120,250
Health . . . . .	..	162	161	290	584
Welfare . . . . .	-26	-50	21	507	28,243
Housing . . . . .	..	..	..	..	4,000
Development of resources and assistance to industry . . . . .	30,285	15,964	14,464	16,796	9,721
Other functions . . . . .	-275	-294	-319	-328	-370
Not allocated to function—					
Payments under Financial Agreement . . . . .	35,557	36,789	38,441	39,720	41,492
Debt charges assistance . . . . .	..	..	..	11,504	23,008
<i>Total specific . . . . .</i>	<i>113,879</i>	<i>103,417</i>	<i>129,773</i>	<i>171,806</i>	<i>226,928</i>
General purpose—					
Financial assistance grants . . . . .	907,539	1,018,193	1,141,319	1,418,518	1,440,878
Special grants . . . . .	35,407	17,392	21,900	18,680	23,800
Special revenue assistance . . . . .	..	14,000	16,000	43,000	55,000
<i>Total general . . . . .</i>	<i>942,946</i>	<i>1,049,585</i>	<i>1,179,219</i>	<i>1,480,198</i>	<i>1,519,678</i>
<i>Total current . . . . .</i>	<i>1,056,826</i>	<i>1,155,001</i>	<i>1,308,992</i>	<i>1,652,004</i>	<i>1,746,606</i>
<b>CAPITAL GRANTS</b>					
Specific purpose—					
Education . . . . .	53,958	55,377	71,160	74,035	85,969
Health . . . . .	5,062	5,861	7,053	5,404	6,127
Welfare . . . . .	..	125	1,081	5,419	8,624
Development of resources and assistance to industry . . . . .	8,423	12,396	17,376	33,256	42,133
Transport and communication . . . . .	186,589	187,501	211,167	230,900	258,309
Other functions . . . . .	843	2,648	3,610	5,278	5,572
<i>Total specific . . . . .</i>	<i>254,876</i>	<i>263,908</i>	<i>311,447</i>	<i>354,292</i>	<i>406,734</i>
General purpose—					
Capital assistance grants . . . . .	..	..	..	200,000	219,100
<i>Total capital . . . . .</i>	<i>254,876</i>	<i>263,908</i>	<i>311,447</i>	<i>554,292</i>	<i>625,834</i>

**General purposes grants**

*The Financial Assistance Grants.* Details of the financial assistance grants arrangements existing in 1971-72 and prior years are given in earlier issues of the Year Book (see No. 58, page 548). Revised arrangements to apply over the five years 1970-71 to 1974-75 are embodied in the *States Grants Act (No. 2) 1971*.

The financial assistance grants, which are the main general revenue grants to the States, will continue to increase each year in proportion to the increase in average wages in Australia as a whole in the year ending 31 March in the year of payment and to the increase in each States' population in the year ending 31 December in the year of payment and by a further 'betterment factor.' However, this last factor will increase, beginning with the calculation of the 1971-72 grants, from 1.2 per cent to 1.8 per cent. Further grants are provided for over the years 1970-71 to 1974-75 to New South Wales and Victoria (equal to two dollars per head of their population, increasing to \$3.50 in 1972-73) to Queensland (by way of an annual addition of \$2 million to the base on which its grant is calculated) and to Western Australia (the amount being \$9.5 million in 1971-72, \$10.0 million in 1972-73, \$3.5 million in 1973-74 and \$0.4 million in 1974-75). Compensatory grants payable to the States for the loss of receipts duty are subject to increases under the formula. As from 1971-72,

financial assistance grants otherwise payable are to be reduced to offset the transfer of payroll taxation from the Commonwealth to the States. The following table shows details of the calculation of the financial assistance grants for 1971-72.

CALCULATION OF FINANCIAL ASSISTANCE GRANTS FOR 1971-72  
(\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
'Base' grants(a) . . . . .	473,588	352,732	221,552	153,932	152,963	65,731	1,420,498
Plus additions under formula(b) . . . . .	72,165	53,197	34,927	22,756	26,275	9,275	218,594
Formula grants . . . . .	545,753	405,929	256,479	176,688	179,238	75,006	1,639,092
Plus additional grants to particular States . . . . .	(c)9,282	(c)7,061	..	..	(d)9,500	..	25,843
Less reduction to offset the transfer of payroll tax(e) . . . . .	92,830	64,525	24,875	18,197	17,778	5,850	224,057
Total financial assistance grants . . . . .	462,204	348,464	231,603	158,491	170,960	69,156	1,440,878

(a) Financial assistance grants paid in 1970-71 under the *States Grants Act* 1971-72. They are the totals of the 1970-71 formula grants, additions of \$2 million and \$10 million for Queensland and Tasmania respectively, and the additions to the base made to compensate for the loss of receipts duty. (b) Due to population increases in each State in the year ended 31 December 1971 (the weighted average of these increases was 1.83 per cent) to an increase in average wages in Australia as a whole in the year ending March 1972 of 11.31 per cent, and to the betterment factor of 1.8 per cent. (c) Equal to \$2 per head of these States' populations at 31 December 1971. (d) Additional grant reduced from the \$12.5 million paid in 1970-71. (e) This amount was agreed between the Commonwealth and State Treasuries and was formally determined by the Treasurer in accordance with the *States Grants Act* 1971-72.

*Special Grants.* These grants are paid to the financially weaker States as supplements to the financial assistance grants. They are subject to annual recommendation by the Commonwealth Grants Commission. Each recommendation by the Commission for payment of a special grant consists of two parts: (i) One part is based on an estimate of the claimant State's financial need in the current financial year, and is treated as an advance payment subject to adjustment two years later when the Commission has compared in detail the audited budget results and standards of effort and of services provided in that year for both the claimant State and the States which the Commission takes as 'standard' (New South Wales and Victoria at present). (ii) The other part represents the final adjustment to the advance payment made two years earlier and is known as the completion payment. The following table shows special grants paid in the years 1968-69 to 1972-73.

COMMONWEALTH GRANTS COMMISSION: SPECIAL GRANTS, 1968-69 TO 1972-73  
(\$'000)

	1968-69	1969-70	1970-71	1971-72	1972-73
Queensland—					
Advance payment . . . . .	..	..	..	9,000	10,000
Completion payment(a) . . . . .	..	..	..	..	..
Total . . . . .	..	..	..	9,000	10,000
South Australia—					
Advance payment . . . . .	..	..	5,000	7,000	13,500
Completion payment(a) . . . . .	..	..	..	..	7,500
Total . . . . .	..	..	5,000	7,000	21,000
Western Australia—					
Advance payment . . . . .	..	..	..	..	..
Completion payment(a) . . . . .	..	582	..	..	..
Total . . . . .	..	582	..	..	..
Tasmania—					
Advance payment . . . . .	18,000	22,000	22,000	11,000	10,000
Completion payment(a) . . . . .	-1,190	-100	1,680	-3,200	-2,400
Total . . . . .	16,810	21,900	(b)23,680	7,800	7,600
Grand total . . . . .	17,392	21,900	28,680	23,800	38,600

(a) Adjustment to estimated grant paid two years previously. (b) \$10,000,000 and \$13,680,000 paid as Financial Assistance Grants and Special Grants respectively.

Minus sign (—) denotes excess of repayment.



*Capital assistance grants.* Also as part of the new revenue assistance arrangements, the Commonwealth has undertaken to pay grants to the States to finance capital works. The grants replace State borrowings and thereby relieve them of debt charges they would otherwise have had to pay. These grants, which were authorised by the *States Grants (Capital Assistance) Act* 1970, totalled \$200 million in 1970-71, \$219.1 million in 1971-72 and will amount to \$248.5 million in 1972-73.

### Specific purpose grants

#### *Education*

Payments to the States for universities were first introduced in 1951-52, and details of the States Grants (Universities) Acts under which they were continued are given in earlier issues of the Year Book (see No. 51 page 923 and No. 52 page 770). The *States Grants (Universities) Act* 1971 authorised grants totalling approximately \$251,400,000 for the Commonwealth share of the agreed program of development of State universities for the years 1970 to 1972. (See also Chapter 19, Education Cultural Activities, and Research.)

The Commonwealth, in the 1970-72 triennium, is meeting the full cost\* of a \$13.5 million research programme approved by the Australian Research Grants Committee. In addition, the Commonwealth has agreed to finance a program of research costing \$20 million in the 1973-75 triennium.

*Colleges of Advanced Education.* Under the States Grants (Advanced Education) Acts, the Commonwealth is providing financial assistance to the States of \$100.8 million during the 1970-72 triennium for recurrent and capital expenditures.

The *States Grants (Science Laboratories) Act* 1971 extended for the four years ending 30 June 1975 the operation of the scheme outlined in Official Year Book No. 54 page 745. A total payment of \$43.3 million is provided for with equal annual authorisations.

Grants for buildings and equipment for use in technical training in schools and colleges conducted by States only are provided for under the *States Grants (Technical Training) Act* 1971 which provides for the payment of up to \$36 million in the years 1970-71 to 1972-73.

Under the *States Grants (Teachers Colleges) Act* 1970 the Commonwealth provided for a maximum amount of \$30 million over the three years ending 30 June 1973 for the construction and equipping of teachers colleges.

Under the *States Grants (Secondary School Libraries) Act* 1971 grants totalling \$30 million were authorised over the three years commencing 1 January 1972 to finance buildings and associated capital facilities for libraries in government and non-government secondary schools.

The *States Grants (Pre-school Teachers Colleges) Acts* 1968, 1971 and 1972 provided for capital grants totalling \$2.5 million to 31 December 1973 for the purpose of increasing the physical capacity of approved pre-school teachers colleges.

The *States Grants (Independent Schools) Act* 1972 authorised payments to the States, for transmission to independent schools, of contributions to school running costs at rates of \$50 per primary pupil and \$68 per secondary pupil per annum as from the beginning of 1972.

The *States Grants (Capital Assistance) Act* 1971-72 provides an amount of \$20 million over the eighteen months January 1972 to July 1973 for capital expenditure on government primary and secondary schools.

#### *Health*

The *Tuberculosis Act* 1948 provided for the reimbursement by the Commonwealth of capital and maintenance expenditure incurred by the States in the provision of facilities for the diagnosis, treatment and control of tuberculosis.

The *States Grants (Mental Health Institutions) Act* 1964-1970 authorised assistance to the States amounting to one-third of their total expenditure on building and equipping approved mental health institutions up to 30 June 1973.

#### *Welfare*

The *States Grants (Home Care) Act*, 1969 the *States Grants (Paramedical Services) Act* 1969 and the *States Grants (Nursing Homes) Act* 1969 provide funds for a range of home care services, senior citizens' centres and nursing homes, mainly for aged persons. See Chapters 13, Welfare Services, and 14, Public Health.

During December 1971 the Commonwealth introduced a scheme of grants to the States for employment-creating activities in non-metropolitan areas. In 1971-72 these grants amounted to \$27 million.

*Development of resources and assistance to industry**Natural disasters*

Payments to the States for natural disaster relief (drought, flood, bushfire, earthquake, cyclone, mouse plague) include financial assistance to alleviate personal hardship and distress and to enable the States to meet budgetary problems arising from the effects on their revenues of such natural disasters. Such relief does not normally cover the full cost of restoration of private assets damaged by natural disasters, it being regarded as the individual's responsibility to provide against such losses by way of insurance. Of the total amount of \$5,682,000 made available by the Commonwealth for this purpose in 1971-72, grants of \$5,539,000 were paid to Queensland for drought and cyclone relief and cyclone damage restoration.

*Water resources projects*

*Investigation and measurement of water resources.* Commonwealth commitments under the National Water Resources Development Programme up to 30 June 1971 included further grants of up to \$12.8 million to Queensland for Bundaberg Irrigation Works, further assistance of up to \$9 million to New South Wales for flood mitigation works on various of its coastal rivers, further grants of up to \$4.7 million to New South Wales and Queensland towards the cost of construction of a dam and associated works on Pike Creek in the border river region of the two States, \$2 million to Victoria towards the cost of construction of a pipeline and certain associated works to carry water from the River Murray to rural holdings in the Millewa district, and of \$8.2 million for additional investigation and measurement of State water resources in a three-year program commencing in 1970-71.

*Fairbairn Dam.* The *Queensland Grant (Maraboon Dam) Act* 1968 provided for grants to Queensland of up to \$20 million for the construction of a dam on the Nogoa River near Emerald.

*Copeton Dam.* Commonwealth grants up to \$20 million will be made to New South Wales under the *New South Wales Grant (Gwydir River Dam) Act* 1969 for the construction of a dam on the Gwydir River near Copeton.

*King River Dam.* Under the *Victoria Grant (King River Dam) Act* 1969 the Commonwealth is providing grants of up to \$4 million to Victoria for the construction of a dam on the King River south of Cheshunt.

*Tailem Bend to Keith Pipeline.* The construction of a pipeline and certain associated works to carry water from Tailem Bend to Keith in South Australia is being assisted financially by provision of grants up to \$6 million under the *South Australia Grant (Tailem Bend to Keith Pipeline) Act* 1969.

*Ord River Irrigation Project.* The *Western Australia (Ord River Irrigation) Act* 1968 provided for financial assistance to Western Australia on the basis of grants for dam construction and interest-bearing loans in respect of the irrigation works. Grants amounting to \$4,593,000 were paid during 1971-72.

*River Murray Salinity Reduction.* The *Victoria Grant (River Murray Salinity) Act* 1968 provides for grants to Victoria of up to \$3,600,000 for two salinity reduction projects on the River Murray.

*Cressy-Longford Irrigation Works, Tasmania.* Grants of up to \$750,000 to Tasmania for the construction of a channel system and associated works to carry water from the tailrace of the Poatina Power Station to supply rural holdings were provided for by the *Tasmania Grant (Cressy-Longford Irrigation Works) Act* 1969.

*Assistance to Primary Industry*

*Marginal dairy farms reconstruction.* Under the *Marginal Dairy Farms Agreement Act* 1970 the Commonwealth may provide financial assistance to the States of up to \$25 million to enable the States to acquire marginal dairy farms from their owners by agreement, and dispose of them so as to encourage the most practicable and economic use of the land. The States are required to repay half of the sum paid out by the Commonwealth under this scheme. Payments to the States in 1971-72 amounted to \$7,592,000.

*Rural reconstruction.* The *States Grants (Rural Reconstruction) Act* 1971 provides for the Commonwealth to make available up to \$100 million over the period ended 30 June 1975 to finance schemes for farm debt reconstruction, farm build-up, and rehabilitation for persons forced to leave rural industry. Three-quarters of the amount paid by the Commonwealth over the period of the scheme is to be repaid by the States. Payments under the scheme in 1971-72 amounted to \$40 million.

*Transport and communication**Roads projects*

The *Commonwealth Aid Roads Act* 1969 provided for principal and supplementary grants totalling \$1,252,050,000 to be paid to the States over the five-year period commencing on 1 July 1969. Supplementary grants totalling \$52,050,000 are to be made to South Australia, Western Australia and Tasmania to assist in the transition from arrangements under the 1964 Act and the principal grant of \$1,200 million is to be allocated specifically as follows: Urban-arterial and sub-arterial roads \$600,690,000; Rural-arterial roads \$186,760,000 and other rural roads \$394,550,000; and planning and research \$18,000,000. Total grants of \$1,252,050,000 payable in the five-year period from 1969-70 to 1973-74 are to be allocated on the following basis: New South Wales, \$380,400,000; Victoria, \$254,400,000; Queensland, \$231,600,000; South Australia, \$129,000,000; Western Australia, \$200,400,000; and Tasmania, \$56,250,000. In addition, the Commonwealth has agreed to provide up to \$2.5 million to South Australia towards the cost of completing the sealing of the Eyre Highway. For details of previous legislation *see* earlier year books.

*Beef cattle roads.* The *States Grants (Beef Cattle Roads) Act* 1968 provided for grants of \$39,500,000, \$9,500,000, and \$1,000,000 for Queensland, Western Australia, and South Australia respectively for a programme of beef cattle road construction over a period of seven years commencing from 1 July 1967.

*Railway projects*

The Commonwealth is continuing to make grants to South Australia and Western Australia under its railway standardisation agreement with those two States. In addition, from 1971-72 onwards \$1.75 million was made available to Tasmania to meet part of the cost of the construction of a new rail link between Nelsons Creek and Bell Bay, and the upgrading of the existing rail track between Launceston and Nelsons Creek and associated works.

*Harbours*

The Commonwealth has agreed to provide financial assistance to Tasmania of \$1.4 million towards the construction of port facilities at Grassy Harbour, King Island.

*Other functions*

*Housing.* With the termination of the Commonwealth-State Housing Agreement, States' borrowings through the Loan Council are to be supplemented by: (i) cumulative grants of \$2.75 million a year payable for 30 years in respect of each of the years from 1971-72 to 1975-76 to replace interest concessions under the old agreement, the total sum over 30 years is to aggregate \$412.5 million; (ii) non-cumulative grants of \$1.25 million each year for the next five years, a total of \$6.25 million, for reducing rents of dwellings for families considered to have insufficient means to pay the rents ordinarily payable to State authorities in respect of these dwellings.

*Aboriginal Advancement.* The *States Grants (Aboriginal Advancement) Acts* 1969, 1970 and 1971 provided for the payment to the States of grants totalling \$9.2 million in 1971-72 and an estimated \$14.5 million in 1972-73 for Aboriginal advancement particularly in the fields of housing, education and health.

*Development of Exmouth township, Western Australia.* The Commonwealth has assisted the Western Australian Government in financing the cost of developing a township at Exmouth in connection with the United States Naval Communications Station established at North West Cape.

*Other specific purpose grants*

*Contributions under Financial Agreement.* Details of the Financial Agreement between the Commonwealth and the States are given in Year Book No. 37, pages 685-90. Under this Agreement the Commonwealth undertook to contribute \$15,169,824 per annum towards interest payable on the State loan securities for a period of 58 years from 1 July 1927. This amount is distributed among the States as follows: New South Wales, \$5,834,822; Victoria, \$4,254,318; Queensland, \$2,192,470; South Australia, \$1,407,632; Western Australia, \$946,864; Tasmania, \$533,718. In addition, under the Financial Agreement the Commonwealth agreed to make certain contributions to the National Debt Sinking Fund for redemption of State loan securities. Details of these are given on page 609 of this chapter.



*Debt Charges Assistance.* As part of the revised revenue assistance arrangements to apply over the five years 1970-71 to 1974-75 the Commonwealth is providing the States with grants to finance increasing portions of the interest and sinking fund charges on certain State debt amounting to \$1,000 million. The grants, which are authorised by the *States Grants (Debt Charges Assistance) Act* 1970 totalled \$11,504,000 in 1970-71 and will increase by that sum each subsequent year. Over the five years 1970-71 to 1974-75, the total assistance provided will amount to \$172,560,000.

#### Advances to the States

The following tables show figures of advances to the States and repayments of advances. More detailed figures appear in *Public Authority Finance: Commonwealth Authorities*.

#### COMMONWEALTH AUTHORITIES: ADVANCES TO THE STATES, BY FUNCTION, 1971-72 (\$'000)

Function	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
GROSS							
Development of resources and assistance to industry . .	8,750	6,718	12,330	4,165	8,655	1,041	41,657
Transport and communication—							
Railway projects . . . .	..	..	..	272	1,169	1,820	(a)3,761
Other . . . . .	..	..	..	1,750	..	..	1,750
Power, fuel and light . . .	..	..	..	..	..	2,500	2,500
Housing . . . . .	5,545	1,165	..	..	324	..	7,034
Not allocated to function . .	17,500	..	..	..	..	..	17,512
<b>Total gross advances . .</b>	<b>31,795</b>	<b>7,883</b>	<b>12,330</b>	<b>6,187</b>	<b>10,148</b>	<b>5,361</b>	<b>74,214</b>
REPAYMENTS							
Development of resources and assistance to industry . .	2,998	872	3,475	4,427	1,863	1,495	15,130
Transport and communication—							
Railway projects . . . .	192	..	1,422	343	1,628	..	3,585
Other . . . . .	330	..	642	..	151	..	1,123
Power, fuel and light . . .	..	..	..	..	..	..	..
Housing . . . . .	5,816	5,189	1,575	1,986	1,473	604	16,643
Not allocated to function . .	..	..	..	..	..	..	1,275
<b>Total repayments .. .</b>	<b>9,336</b>	<b>6,061</b>	<b>7,114</b>	<b>6,756</b>	<b>5,115</b>	<b>2,099</b>	<b>37,756</b>
NET							
Development of resources and assistance to industry . .	5,752	5,846	8,855	-262	6,792	-454	26,527
Transport and communication—							
Railway projects . . . .	-192	..	-1,422	-71	-459	1,820	(a)176
Other . . . . .	-330	..	-642	1,750	-151	..	627
Power, fuel and light . . .	..	..	..	..	..	2,500	2,500
Housing . . . . .	-271	-4,024	-1,575	-1,986	-1,149	-604	-9,609
Not allocated to function . .	17,500	..	..	..	..	..	16,237
<b>Total net advances . .</b>	<b>22,459</b>	<b>1,822</b>	<b>5,216</b>	<b>-569</b>	<b>5,033</b>	<b>3,262</b>	<b>36,458</b>

(a) The estimated advance for intersystem passenger vehicles has not been allocated and has been included in the total only.

Minus sign (—) denotes excess of repayment.

**COMMONWEALTH AUTHORITIES: ADVANCES TO THE STATES  
BY FUNCTION, 1967-68 TO 1971-72**

(\$'000)

<i>Function</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
<b>GROSS</b>					
Development of resources and assistance to industry . . . . .	50,412	22,429	16,923	26,047	41,657
Transport and communication—					
Railway projects . . . . .	13,989	10,244	9,971	4,233	3,761
Other . . . . .	..	11,000	..	2,250	1,750
Power, fuel and light . . . . .	5,300	3,200	9,704	3,211	2,500
Housing . . . . .	129,943	132,899	141,691	150,777	(a)7,034
Not allocated to function(b) . . . . .	726	..	35,533	269	17,512
<b>Total gross advances . . . . .</b>	<b>200,370</b>	<b>179,771</b>	<b>213,821</b>	<b>186,787</b>	<b>74,214</b>
<b>REPAYMENTS</b>					
Development of resources and assistance to industry . . . . .	15,402	19,482	18,829	12,185	15,130
Transport and communication—					
Railway projects . . . . .	1,725	1,886	3,010	3,231	3,585
Other . . . . .	1,113	1,115	1,118	1,120	1,123
Power, fuel and light . . . . .	25	1	..	4	..
Housing . . . . .	12,297	13,413	14,567	15,647	16,643
Not allocated to function(b) . . . . .	..	31,202	..	3,705	1,275
<b>Total repayments . . . . .</b>	<b>30,563</b>	<b>67,100</b>	<b>37,525</b>	<b>35,892</b>	<b>37,756</b>
<b>NET</b>					
Development of resources and assistance to industry . . . . .	35,010	2,946	-1,907	13,863	26,527
Transport and communication—					
Railway projects . . . . .	12,264	8,358	6,961	1,002	176
Other . . . . .	-1,113	9,885	-1,118	1,130	627
Power, fuel and light . . . . .	5,275	3,199	9,704	3,207	2,500
Housing . . . . .	117,646	119,486	127,124	135,130	-9,609
Not allocated to function(b) . . . . .	726	-31,202	35,533	-3,436	16,237
<b>Total net advances . . . . .</b>	<b>169,806</b>	<b>112,671</b>	<b>176,297</b>	<b>150,894</b>	<b>36,458</b>

(a) From 1971-72 this item includes only advances to the States in respect of the cost of erection of houses for military personnel. Other funds for housing are obtained by the States under the State Loan program. (b) Comprised mainly of States' deposits with the National Debt Sinking Fund.

Minus sign (—) denotes excess of repayments.

Details of some of the more important State projects for which the Commonwealth is providing financial assistance by way of advances are set out below.

**Development of resources and assistance to industry**

*Water resources projects*

*Blowering Reservoir, New South Wales.* The Blowering Reservoir was constructed at the expense of the State of New South Wales mainly by the Snowy Mountains Hydro-electric Authority, and the Commonwealth has financed half the cost in the form of repayable interest-bearing loans to that State.

Under the *Western Australia (South-west Region Water Supplies) Agreement Act 1965-1971*, the Commonwealth is providing financial assistance of up to \$12,000,000 by way of interest-bearing loans to Western Australia to accelerate works undertaken by the State to extend the comprehensive water supply scheme in the south-west portion of the State.

*Chowilla and Dartmouth Reservoirs.* Under the River Murray Waters Agreement the Commonwealth provided assistance in the form of interest-bearing loans amounting to \$1,500,000 to meet the capital costs of the Chowilla Reservoir. Because of significant increases in the estimated cost of the project, it was decided in August 1967 to suspend work on it. Further investigations then followed, including a re-assessment of the likely yield from both Chowilla and alternative storages on the Upper Murray and Mitta Mitta Rivers. Following this re-assessment, the River Murray Commission in February 1969 agreed that a 3,000,000 acre feet storage at Dartmouth on the Mitta Mitta River provided the greatest overall benefits in terms of cost and yield and should be the next development of the resources of the River Murray. The estimated cost of the Dartmouth Dam is \$64 million, and the Commonwealth is making advances to the three States concerned (New South Wales, Victoria and South Australia) amounting to fifty per cent of each of their one-quarter share of the construction costs. The Commonwealth itself will make its own quarter contribution of the cost of the project. No payments have yet been made to the States, but it is estimated the \$500,000 will be paid to each of the three participating States in 1972-73. (Further information can be found in Chapter 23, Water Conservation and Irrigation).

#### *Rural industries development projects*

*Brigalow lands.* Under the Brigalow Lands Agreement Acts, Commonwealth advances to the State of Queensland for specified works associated with the production of beef cattle and other primary products in the Fitzroy River Basin and the supply of beef for export were fixed at an overall limit of \$23 million. Repayments over a twenty-year period commenced in 1968 in respect of advances made prior to 1 July 1967 and in 1971 in respect of advances made after 1 July 1967.

*Softwood forestry.* The *Softwood Forestry Agreements Act* 1967 authorised the Commonwealth to provide assistance during the five years ending 30 June 1971 for increased planting of softwood forests. Total assistance of the order of \$17.7 million is in the form of interest-bearing loans repayable over twenty-five years.

#### *Transport and communication*

*Railway projects.* The Commonwealth is continuing to make advances to South Australia and Western Australia to finance 30 per cent of the cost associated with railway standardisation in those States. In 1971-72, \$2.5 million was made available to Tasmania to finance railway extensions and up-grading in that State.

*Natural gas pipeline, South Australia.* Under the *Natural Gas Pipeline (South Australia) Agreement Act* 1967 the Commonwealth is providing a maximum of \$15 million by way of interest-bearing loans to help finance the construction of a pipeline to transport gas from natural gas fields at Gidgealpa and Moomba.

#### *Power, fuel and light*

The *Tasmania Agreement (Hydro-Electric Power Development) Act* 1968 provided for interest-bearing loans with an overall limit of \$47 million to Tasmania for the financing of a five-year programme of accelerated hydro-electric development based on the commencement of development of the Gordon River area in the south west of the State.

## **Main components of receipts**

The main components of the receipts of Commonwealth authorities are taxation, income of public enterprises and other factor income transfers, and borrowing and financing transactions. Taxation constitutes by far the major source of receipts. Borrowing is now of minor significance so far as Commonwealth authorities are concerned, although, as may be seen in later tables, it has become an increasingly significant source of funds for the States. The realisation of the increasing commitment of State revenues to the servicing of a rapidly growing debt burden led to the arrangement agreed to at the 1970 Premiers' Conference whereby the Commonwealth now makes interest-free capital grants to the States in lieu of moneys previously obtained by the States from borrowings (*see* page 560).

In what follows, an account is given of the system of Commonwealth taxation, and some details are given of the current operations of Commonwealth public enterprises. Borrowing and other financing activities of Commonwealth authorities are dealt with for convenience in a later section relating to the debt of all public authorities.

#### **Commonwealth taxation—summary**

The following tables show Commonwealth taxation receipts classified by type of tax for the years 1967-68 to 1971-72, and the proportion of each type to total collections.



**COMMONWEALTH AUTHORITIES: TAXATION BY TYPE OF TAX**  
**1967-68 TO 1971-72**  
**(\$'000)**

<i>Type of tax</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Income tax—					
Individuals . . . . .	2,175,249	2,377,407	2,854,857	3,174,983	3,764,686
Companies(a) . . . . .	830,142	998,021	1,140,922	1,379,255	1,462,097
Dividend (withholding) . . . . .	21,716	28,303	38,003	35,956	42,002
Interest (withholding) . . . . .	910	4,456	8,019	12,318	15,650
<i>Total income taxes</i> . . . . .	<i>3,028,017</i>	<i>3,408,187</i>	<i>4,041,801</i>	<i>4,602,512</i>	<i>5,284,435</i>
Estate duty . . . . .	54,717	60,726	71,332	70,101	67,258
Gift duty . . . . .	8,543	9,376	8,553	7,795	8,530
Rates on land . . . . .	1,045	1,069	1,296	2,066	5,312
Customs duties . . . . .	312,220	346,264	413,559	465,989	468,732
Excise duties . . . . .	855,168	902,307	939,283	1,053,460	1,212,925
Sales tax . . . . .	416,626	494,090	568,668	632,537	680,772
Primary production taxes . . . . .	31,649	33,674	33,133	27,300	28,836
Licences and registration fees n.e.i.—					
Broadcasting listeners' and television viewers' licences . . . . .	39,182	45,125	48,389	49,563	61,785
Broadcast station licences . . . . .	299	310	345	341	474
Television station licences . . . . .	1,144	1,392	1,491	1,647	1,967
Other . . . . .	1,721	2,176	2,365	3,236	4,037
<i>Total licences, etc.</i> . . . .	<i>42,346</i>	<i>49,003</i>	<i>52,590</i>	<i>54,787</i>	<i>68,263</i>
Stevedoring industry charge . . . . .	14,259	14,402	13,726	13,131	15,987
Payroll tax . . . . .	184,416	205,568	230,469	247,677	91,170
Other taxes, fees, fines, etc. . . . .	1,807	2,330	3,458	3,970	4,900
<i>Total taxation</i> . . . . .	<i>4,950,813</i>	<i>5,526,996</i>	<i>6,377,868</i>	<i>7,181,325</i>	<i>7,937,120</i>
<i>of which—</i>					
Taxes levied in the Territories only . . . . .	3,029	3,589	5,599	7,665	11,549

(a) Excludes income tax paid by public enterprises: 1967-68, \$6.5m; 1968-69, \$8.5m; 1969-70, \$10.4m; 1970-71, \$16.1m; 1971-72, \$15.4m.

**COMMONWEALTH AUTHORITIES: PROPORTION OF EACH TYPE OF TAX TO**  
**TOTAL TAXATION, 1967-68 TO 1971-72**  
**(Per cent)**

<i>Type of tax</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Income tax . . . . .	61.2	61.7	63.4	64.1	66.6
Estate duty . . . . .	1.1	1.1	1.1	1.0	0.9
Gift duty . . . . .	0.2	0.2	0.1	0.1	0.1
Rates on land . . . . .	..	..	..	..	0.1
Customs duties . . . . .	6.3	6.3	6.5	6.5	5.9
Excise duties . . . . .	17.3	16.3	14.7	14.7	15.3
Sales tax . . . . .	8.4	8.9	8.9	8.8	8.6
Primary production taxes . . . . .	0.6	0.6	0.5	0.4	0.4
Licences and registration fees n.e.i. . . . .	0.9	0.9	0.8	0.8	0.9
Stevedoring industry charge . . . . .	0.3	0.3	0.2	0.2	0.2
Payroll tax . . . . .	3.7	3.7	3.6	3.4	1.2
Other taxes, fees, fines, etc. . . . .	..	..	..	0.1	0.1
<i>Total taxation</i> . . . . .	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

### Taxes on income

A description of the development of income taxes in Australia appeared in Year Book No. 35, page 926. Since July 1942 the Commonwealth, under the uniform tax arrangement, has been the only authority imposing taxes on income.

The laws dealing with the assessment and imposition of Income tax at 30 June 1972 were — *Income Tax Assessment Act 1936-1972*, *Income Tax Act 1971-1972*, *Income Tax (Non-Resident Dividends and Interest) Act 1967*, *Income, Tax (Drought Bonds) Act 1969*, and the *Income Tax Regulations*. The second-mentioned Act is an annual measure, and its primary purpose is to declare the rates of tax payable for the financial year.

Both individuals and companies are liable for income tax. Private companies are subject to tax on undistributed income in addition to the primary income tax levied on all companies.

The operation of the *Income Tax Assessment Act* 1936–1972 is affected by the following Acts:

- (a) *Taxation Administration Act* 1953–1968, which provides for the administration of certain Acts relating to taxation;
- (b) *Income Tax (International Agreements) Act* 1953–1972 which gives the force of law to comprehensive double taxation agreements between the Commonwealth and the Governments of the United Kingdom, the United States of America, Canada, New Zealand, Singapore and Japan. This Act also gives the force of law to an agreement with the Government of France for the avoidance of double taxation on income derived from international air transport. An agreement with Italy dealing with airline profits has been signed, but has not yet been given the force of law.
- (c) *Diplomatic Privileges and Immunities Act* 1967 which provides for the exemption from income tax of certain income of diplomatic representatives, their staff and families.
- (d) *International Organisations (Privileges and Immunities) Act* 1963–1966, and Regulations made under that Act, which provide for exemption from income tax of certain incomes of international organisations and their officials;
- (e) *Loan (Drought Bonds) Act* 1969 which authorises the issue of drought bonds and empowers the Commissioner of Taxation to declare when drought bonds shall become redeemable.

Individuals with incomes in excess of \$1,040, non-profit companies with total incomes in excess of \$416, and all other companies, partnerships and trusts deriving income are required to lodge returns of income each year.

Where applicable, income tax payable is assessed and assessment notices showing the amounts payable are issued during the year following the year of income. For individuals the approximate amount payable, however, has already been collected during the income year (from employees by deductions from salary or wages and from non-employees by a provisional tax). The amount shown on the assessment notice is therefore adjusted against the amount already paid and any difference either collected or refunded.

#### **Taxes on income—individuals**

##### *Pay-as-you-earn-system*

*Salary and wage earners* are subject to tax instalment deductions by employers according to a prescribed scale which shows the amount to be deducted according to income and number of dependants. Under the group employer scheme of deduction (covering most employers of more than ten persons), the amount deducted is required to be regularly remitted to the Commonwealth Taxation Office.

Not later than 14 July each year employers are required to supply each employee with a group certificate showing amount earned and deductions made during the year ended 30 June.

Under the stamp scheme used by employers other than group employers, a stamp deduction sheet in two parts is used. Each four weeks the employer purchases stamps (also in two parts) for the amount of deductions made each pay day and sticks one part on each half of the sheet. At the end of the year the employer gives the employee one half of the sheet and sends the other half to the Taxation Office. The employee's half is then used in the same way as a group certificate.

*Individuals with taxable income of \$400 or more from other than salary or wages* may be required to pay provisional tax in respect of that income. Collection of provisional tax for the current year is made at the same time as collection and assessment for the previous year are adjusted. The notice of assessment shows an amount of provisional tax for the current year. The provisional amount is intended as an approximation to the tax which will be assessed after the return of income for the current year has been lodged. It is ascertained by assuming that the income of the current year will be the same as that for the previous year and applying to that income the rates for the current year. The assessment notice shows the provisional tax paid in the previous year as a credit against the tax assessed on the basis of the return for that year.

##### *Assessable income*

Assessable income includes all income, other than exempt income, derived directly or indirectly from sources in Australia and, in the case of resident taxpayers, includes income from sources outside Australia.

Income includes certain other receipts declared by the Assessment Act to be assessable income. Receipts such as gifts (other than gratuities received by an employee from his employer in the course of his employment), legacies, profits from the sale of property (not acquired for the purpose of profit making by sale), lottery wins, and most capital gains are not regarded as income and are not assessable.

Certain types of income are exempt from tax, the more important being (i) war and service pensions (ii) age and invalid pensions, child endowment and other payments under the *Social Services Act* 1947-1972 and the *Tuberculosis Act* 1948, (iii) income from gold-mining and some other mining operations, (iv) twenty per cent of certain mining profits, (v) dividends paid out of exempt mining profits, (vi) income received from a scholarship, bursary or other educational allowance, (vii) income of certain non-profit institutions and mutual income of some other organisations, (viii) income of specified superannuation funds, (ix) pay, allowances and bounties for part-time duty, and gratuity payable on a call out for continuous full-time service of members of the Defence Force Emergency Reserves, and (x) pay and allowances of members of the Defence Forces while allotted for duty in special areas (e.g. part of Borneo and adjacent waters, and South Vietnam).

Expenditure incurred in producing assessable income or in carrying on a business is an allowable deduction, except to the extent that it is of a capital, private, or domestic nature, or is incurred in producing exempt income. Subscriptions to certain business associations and trade union dues are also allowable deductions.

Special deductions for both resident and non-resident taxpayers include such items as trading losses incurred in previous years, bad debts, depreciation, annual rates and land taxes paid, gifts to various institutions, certain expenditure on scientific research, and, subject to certain conditions, one-third of amounts paid as calls to mining, prospecting, oil prospecting, or afforestation companies operating in Australia. In lieu of the one-third deduction for calls, capital subscribed to companies engaged in exploration or mining for petroleum and certain other minerals in Australia or Papua New Guinea may, in certain circumstances, be deductible in full.

Special deductions may be allowed for certain expenditure of a capital nature incurred in mining or prospecting operations conducted for the purpose of earning assessable income and in the provision of certain transport facilities necessary for and directly related to those operations. In the case of primary producers certain developmental expenditure of a capital nature may be deducted. Deductions in addition to depreciation are allowed to manufacturers (except for equipment purchased during the period 4 February 1971 to 13 February 1972 inclusive) and primary producers by way of an investment allowance for expenditure on specified plant and equipment. In addition, deductions may be allowed to primary producers for the cost of purchasing drought bonds. Subject to a maximum permissible tax saving, a special rebate is allowed for certain expenditure on export market development. The rebate is in addition to any normal deduction for the expenditure allowed as a business expense.

Residents of Zone A and Zone B, prescribed isolated areas subject to uncongenial climatic conditions and high costs of living are entitled to a zone allowance deduction. Members of the defence forces serving in certain overseas localities, are entitled to a deduction of the same amount as residents of Zone A.

### *Concessional deductions*

Concessional allowances to residents for dependants, medical and dental expenses, life insurance, superannuation contributions, etc. are made as a deduction from income. The maximum deduction allowed for the income year 1972-73 for each dependant or for a housekeeper is shown below.

<i>Dependant, etc. (resident)</i>	<i>Maximum deduction(a)</i>
	\$
Spouse, daughter-housekeeper(b); housekeeper(c); parent or parent-in-law . . . . .	364
One child under 16 years of age; invalid relative(d); student child 16 to under 25 years of age	260
Other children under 16 years of age . . . . .	208

(a) If the dependant is maintained for part only of the year, a partial deduction is allowed. (b) Of a widower or widow. (c) Caring for a spouse in receipt of an invalid pension, or caring for children under 16 years of age of a widower or widow. (d) Child, step-child, brother or sister over 16 years of age.

If a dependant derives separate net income, which includes age or invalid pension but not child endowment, the deduction is reduced by the amount, by which the separate net income exceeds \$130. Scholarships are excluded except insofar as they relate to maintenance.

Medical expenses (less amounts recouped from hospital and medical funds) paid by a resident taxpayer in respect of himself, his spouse, children under 21 years of age and dependants for whom concessional deductions are allowed, are allowed as a concessional deduction. These expenses include payments to a legally qualified medical practitioner, dentist, nurse or chemist, or hospital, in respect of an illness or operation, therapeutic treatment or eye tests, expenditure on medical or surgical appliances, artificial limbs or eyes, hearing aids and spectacles, payment of an attendant of a blind or bed-ridden person or for the maintenance of a trained dog used by a blind person.



Other concessional deductions allowed to resident taxpayers include: (i) payments of life insurance premiums and contributions to superannuation funds and friendly societies, (maximum \$1,200), (ii) payments to medical or hospital funds, (iii) funeral expenses (maximum \$100 for each dependant), (iv) expenditure incurred for the full-time education of children less than twenty-five years of age (maximum \$400 for each child), (v) subscriptions to trade, business or professional associations or unions (maximum \$42 to each), and (vi) self-education expenses paid by the taxpayer for the purpose of gaining qualifications for use in carrying on a profession or business, or in the course of employment.

#### *Effective exemption from tax*

For the income years from 1963–64 to 1971–72 inclusive, the income of a taxpayer without dependants was exempt from income tax if it did not exceed \$416. For 1972–73 the income of a taxpayer without dependants was exempt from income tax if it did not exceed \$1,040. The effect of deductions for dependants was to exempt resident taxpayers up to the incomes shown in the samples hereunder.

#### RESIDENT TAXPAYERS: EFFECTIVE EXEMPTIONS FROM INCOME TAX (\$)

<i>Income years ended June—</i>	<i>Taxpayer with—</i>		<i>Wife and—</i>			
	<i>No dependants</i>	<i>Wife only</i>	<i>one child</i>	<i>two children</i>	<i>three children</i>	<i>four children</i>
1964 to 1967 . . . .	416	702	884	1,014	1,144	1,274
1968 to 1972 . . . .	416	728	936	1,092	1,248	1,404
1973 . . . . .	1,040	1,404	1,664	1,872	2,080	2,288

Special provisions applying for the 1972–73 income year to *resident aged persons* (i.e. men aged 65 years or more or women aged 60 years or more) were:

#### *(A) Single Persons Age Allowance Provisions*

<i>Taxable Income \$</i>	
Up to 1,326	No income tax payable
	<i>Income Tax limited to:</i>
1,327–1,532	16½ per cent of taxable income over \$1,326
1,533–2,080	\$34.33 plus 18 per cent of taxable income over \$1,532
2,081–2,132	\$132.97 plus 45 per cent of taxable income over \$2,080
2,133–2,202	\$156.37 plus 66½ per cent of taxable income over \$2,132

#### *(B) Married Couples Age Allowance Provisions*

<i>Combined Taxable Income(a) \$</i>	
Up to 2,314	No income tax payable
	<i>Income Tax limited to:</i>
2,315–2,500	16½ per cent of taxable income over \$2,314
2,501–3,000	\$31.00 plus 31 per cent of taxable income over \$2,500
3,001–3,640	\$186.00 plus 40 per cent of taxable income over \$3,000
3,641–3,744	\$442.00 plus 45 per cent of taxable income over \$3,640
3,745–3,871	\$488.80 plus 66½ per cent of taxable income over \$3,744

(a) Where a spouse has no taxable income the 'combined taxable income' is regarded as equal to the taxable income of the taxpayer.

#### *Rates of income tax on individuals*

The table on page 570 shows the rates of income tax for income years 1954–55 to 1972–73 as set out in the First Schedule to the Income Tax Act.

Assessable income represents total actual income minus exempt income. Taxable income is the amount remaining after all allowable deductions have been made on assessable income.

Where the taxable income of a person does not exceed \$1,120 the amount of income tax payable is limited to two-thirds of the excess of the taxable income over \$1,040. The tax so ascertained is reduced by any rebate or credit to which the taxpayer is entitled.

The only cases in which incomes below \$1,040 attract tax are those for which special rates are payable in accordance with certain sections of the Income Tax Assessment Act.

For *primary producers* the rate of income tax for the current year is, in general, determined by the average of the taxable incomes for the five years up to and including the current year. In 1951 a taxpayer was given the right to elect not to have the averaging provisions applied but up to 1965-66 income year the election, if made under then existing legislation, was irrevocable. The *Income Tax Tax Assessment Act* 1966 amended this and a primary producer who, prior to the 1966-67 income year, elected to withdraw from the averaging system, was able to review that decision, being permitted to return to the averaging system provided that the necessary election was made in respect of any one of the income years 1966-67 to 1969-70. In the year of re-entry the taxpayer would be treated for averaging purposes as though he had never withdrawn from the system. However, with existing legislation, he will not have the right to withdraw again. The application of the averaging provisions is limited to that part of the taxable income which does not exceed \$16,000. When the taxable income does exceed \$16,000, the balance is taxed at ordinary rates applicable to that part. When the taxable income is less than \$16,000, the rate of tax for averaging purposes is limited to the rate on a taxable income of \$16,000.

The taxable income, including abnormal receipts, of *actors, artists, inventors*, etc. is taxed at the rate appropriate to the normal taxable income plus one-third of the abnormal receipts.

Interest derived from bonds, etc. issued between 1 January 1940 and 31 October 1968 by the Commonwealth, or on certain State semi-government loans issued free of State income tax, is subject to a rebate of income tax of 10 cents for each \$1 of interest received. The rebate does not apply to interest received from bonds, etc., issued on or after 1 November 1968.

#### COMMONWEALTH INCOME TAX—INDIVIDUALS: GENERAL RATES, 1954-55 TO 1972-73 INCOME YEARS

Total taxable income		1954-55 to 1964-65(a)		1965-66 to 1969-70(b)		1970-71 to 1971-72(c)		1972-73	
Column 1	Column 2								
More than—	Not more than—	Tax on amount in col. 1	Tax on each further \$ of income	Tax on amount in col. 1	Tax on each further \$ of income	Tax on amount in col. 1	Tax on each further \$ of income	Tax on amount in col. 1	Tax on each further \$ of income
\$	\$	\$	cents	\$	cents	\$	cents	\$	cents
Nil	200	Nil	0.42	Nil	0.40	Nil	0.30	Nil	0.2
200	300	0.83	1.25	0.80	1.20	0.60	1.20	0.40	0.8
300	400	2.08	2.92	2.00	2.90	1.80	2.70	1.20	2.4
400	500	5.00	4.58	4.90	4.50	4.50	4.10	3.60	3.8
500	600	9.58	6.25	9.40	6.10	8.60	5.50	7.40	4.9
600	800	15.83	8.33	15.50	8.20	14.10	7.40	12.30	6.5
800	1,000	32.50	10.83	31.90	10.80	28.90	9.70	25.30	8.2
1,000	1,200	54.17	12.50	53.50	12.50	48.30	11.30	41.70	9.8
1,200	1,400	79.17	14.17	78.50	14.20	70.90	12.80	61.30	11.3
1,400	1,600	107.50	15.83	106.90	15.90	96.50	14.30	83.90	12.7
1,600	1,800	139.17	17.50	138.70	17.60	125.10	15.80	109.30	14.1
1,800	2,000	174.17	19.17	173.90	19.30	156.70	17.30	137.50	15.4
2,000	2,400	212.50	21.67	212.50	21.60	191.30	19.50	168.30	17.2
2,400	2,800	299.17	24.58	298.90	24.60	269.30	22.10	237.10	19.6
2,800	3,200	397.50	27.08	397.30	27.10	357.70	24.40	315.50	22.0
3,200	3,600	505.83	29.58	505.70	29.60	455.30	26.70	403.50	24.4
3,600	4,000	624.17	32.08	624.10	32.10	562.10	28.80	501.10	26.8
4,000	4,800	752.50	35.42	752.50	35.40	677.30	31.90	608.30	30.3
4,800	5,600	1,035.83	38.33	1,035.70	38.30	932.50	34.50	850.70	33.3
5,600	6,400	1,342.50	41.25	1,342.10	41.20	1,208.50	37.00	1,117.10	35.7
6,400	7,200	1,672.50	43.75	1,671.70	43.80	1,504.50	39.40	1,402.70	37.9
7,200	8,000	2,022.50	46.25	2,022.10	46.30	1,819.70	41.70	1,705.90	39.9
8,000	8,800	2,392.50	48.75	2,392.50	48.70	2,153.30	43.90	2,025.10	41.8
8,800	10,000	2,782.50	51.67	2,782.10	51.70	2,504.50	46.50	2,359.50	44.1
10,000	12,000	3,402.50	55.00	3,402.50	55.00	3,062.50	50.60	2,888.70	48.2
12,000	16,000	4,502.50	57.92	4,502.50	57.90	4,074.50	56.40	3,852.70	54.6
16,000	20,000	6,819.17	60.42	6,818.50	60.40	6,330.50	62.40	6,036.70	60.3
20,000	32,000	9,235.83	63.33	9,234.50	63.30				
32,000	40,000					8,826.50	66.70	8,448.70	64.0
40,000	upwards	16,835.83	66.67	16,830.50	66.70			21,248.70	66.7

(a) For the 1959-60 and 1961-62 to 1963-64 income years a rebate of 5 per cent was allowable on the tax calculated from this schedule. (b) Additional tax equal to 2.5 per cent of the tax calculated from this schedule was also payable. (c) Additional tax equal to 2.5 per cent and 4.375 per cent of the tax calculated from this schedule was also payable for 1970-71 and 1971-72 respectively.

*Income tax payable on specified incomes*

The following table shows, for the income years 1964-65 to 1972-73, the actual income tax payable by taxpayers with various incomes and numbers of dependants without regard to any rebate or refund which may apply.

**COMMONWEALTH INCOME TAX PAYABLE ON SPECIFIED INDIVIDUAL INCOMES  
1964-65 TO 1972-73 INCOME YEARS**

(\$)

<i>Income(a)</i>	1964-65	1965-66 and 1966-67	1967-68 to 1969-70	1970-71	1971-72	1972-73
<b>TAXPAYER WITH NO DEPENDANTS</b>						
\$						
1,000 . . .	54.20	54.83	54.83	49.50	50.41	..
3,000 . . .	451.70	462.78	462.78	416.66	424.28	359.50
5,000 . . .	1,112.50	1,140.10	1,140.10	1,026.53	1,045.32	917.30
7,000 . . .	1,935.00	1,982.86	1,982.86	1,784.42	1,817.06	1,630.10
10,000 . . .	3,402.50	3,487.56	3,487.56	3,139.06	3,196.48	2,888.70
15,000 . . .	6,240.00	6,395.48	6,395.48	5,910.66	6,018.78	5,490.70
20,000 . . .	9,235.80	9,465.36	9,465.36	9,047.16	9,212.66	8,448.70
<b>TAXPAYER WITH DEPENDENT WIFE</b>						
1,000 . . .	25.30	25.45	23.27	21.12	21.51	..
3,000 . . .	376.40	385.53	378.97	341.26	347.51	283.35
5,000 . . .	1,005.38	1,030.37	1,020.95	919.18	936.00	801.00
7,000 . . .	1,809.88	1,854.45	1,842.77	1,658.41	1,688.75	1,492.14
10,000 . . .	3,254.70	3,335.99	3,322.21	2,990.35	3,045.06	2,728.17
15,000 . . .	6,074.36	6,225.74	6,210.32	5,730.29	5,835.11	5,291.95
20,000 . . .	9,063.00	9,288.29	9,272.20	8,847.60	9,009.45	8,229.20
<b>TAXPAYER WITH DEPENDENT WIFE AND ONE CHILD</b>						
1,000 . . .	11.60	11.63	8.71	7.97	8.12	..
3,000 . . .	331.60	339.65	326.54	294.15	299.54	232.97
5,000 . . .	940.91	964.33	945.48	851.18	866.75	722.22
7,000 . . .	1,730.25	1,772.74	1,749.40	1,574.42	1,603.22	1,394.13
10,000 . . .	3,160.70	3,239.55	3,212.00	2,891.21	2,944.11	2,613.51
15,000 . . .	5,968.95	6,117.73	6,086.88	5,610.05	5,712.67	5,149.99
20,000 . . .	8,953.10	9,175.61	9,143.43	8,714.57	8,873.98	8,072.42
<b>TAXPAYER WITH DEPENDENT WIFE AND TWO CHILDREN</b>						
1,000 . . .	..	..	..	..	..	..
3,000 . . .	299.70	306.87	289.54	260.84	265.61	197.19
5,000 . . .	894.88	917.16	888.86	800.16	814.80	659.20
7,000 . . .	1,673.38	1,714.38	1,681.38	1,513.28	1,540.97	1,319.87
10,000 . . .	3,093.50	3,170.66	3,129.32	2,816.86	2,868.39	2,521.78
15,000 . . .	5,893.66	6,040.58	5,994.29	5,519.86	5,620.83	5,036.42
20,000 . . .	8,874.50	9,095.13	9,046.84	8,614.78	8,772.37	7,947.00

(a) Income remaining after allowing all deductions other than deductions for dependants.



*Income tax assessments—Individuals*

The following table shows for the 1970-71 income year the number of taxpayers, income, and net income tax assessed for individuals. For further information see the annual bulletin *Commonwealth Taxation Assessments*.

**COMMONWEALTH INCOME TAX ASSESSMENTS(a): TAXABLE INDIVIDUALS  
BY GRADE OF ACTUAL INCOME AND BY OFFICE OF ASSESSMENT**  
(Income derived in the year 1970-71)

Grade of net income(b) and office of assessment	Taxpayers			Net income(b)	Total taxable income(c)	Net income tax assessed
	Males	Females	Total			
\$        \$	No.	No.	No.	\$'000	\$'000	\$'000
1- 599 . . .	41,420	84,429	125,849	64,654	62,307	1,186
600- 799 . . .	53,930	111,261	165,191	115,503	107,675	3,175
800- 999 . . .	53,324	109,637	162,961	146,535	134,387	5,524
1,000- 1,199 . . .	56,056	114,376	170,432	187,232	168,898	8,629
1,200- 1,399 . . .	62,974	116,356	179,330	233,156	208,260	12,540
1,400- 1,599 . . .	68,031	122,719	190,750	286,254	255,215	17,269
1,600- 1,799 . . .	73,460	129,735	203,195	345,506	307,196	23,206
1,800- 1,999 . . .	77,374	140,134	217,508	413,151	367,739	30,922
2,000- 2,199 . . .	82,779	146,430	229,209	481,205	427,184	39,382
2,200- 2,399 . . .	91,427	135,847	227,274	522,565	460,878	46,208
2,400- 2,599 . . .	103,535	122,473	226,008	564,779	494,839	53,309
2,600- 2,799 . . .	119,507	110,504	230,011	620,581	538,419	61,509
2,800- 2,999 . . .	135,977	93,117	229,094	664,157	569,610	68,171
3,000- 3,999 . . .	844,303	244,857	1,089,160	3,798,245	3,137,296	424,318
4,000- 5,999 . . .	1,147,692	136,480	1,284,172	6,186,744	4,954,817	847,729
6,000- 7,999 . . .	349,743	35,895	385,638	2,623,436	2,077,548	448,092
8,000- 9,999 . . .	114,996	12,984	127,980	1,130,422	903,065	229,740
10,000-19,999 . . .	97,348	12,735	110,083	1,422,012	1,183,319	387,829
20,000-29,999 . . .	10,863	1,349	12,212	289,713	255,740	117,004
30,000 and over . . .	4,101	563	4,664	208,699	192,071	108,878
New South Wales . . .	1,301,914	736,068	2,037,982	7,634,779	6,375,730	1,137,031
Victoria . . .	1,010,584	585,950	1,596,534	5,869,936	4,861,725	861,422
Queensland . . .	487,609	240,963	728,572	2,531,860	2,057,700	342,279
South Australia . . .	333,156	182,022	515,178	1,731,172	1,421,251	229,091
Western Australia . . .	293,523	153,987	447,510	1,604,597	1,335,068	231,662
Tasmania . . .	107,078	52,174	159,252	550,670	446,520	72,323
Northern Territory . . .	18,018	7,637	25,655	111,572	82,912	15,069
Australian Capital Territory . . .	36,958	23,080	60,038	269,962	225,556	45,741
<b>Total . . .</b>	<b>3,588,840</b>	<b>1,981,881</b>	<b>5,570,721</b>	<b>20,304,548</b>	<b>16,806,463</b>	<b>2,934,618</b>

(a) Assessments in respect of 1970-71 incomes issued to 30 September 1972. Assessments issued after that date are not included. (b) Net income is 'Total assessable income less total deductions for expenses incurred in gaining assessable income'. (c) Taxable income is the income remaining after deducting from assessable income all allowable deductions.

Details of the number of individual taxpayers and net income tax assessed by grades of income for the income years 1967-68 to 1970-71 are shown in the following table.

**COMMONWEALTH INCOME TAX ASSESSMENTS: TAXABLE INDIVIDUALS, BY GRADE OF INCOME(a) (INCOME YEARS 1967-68 TO 1970-71)**

Grade of income(a)	1967-68		1968-69		1969-70		1970-71	
	Tax-payers	Net income tax assessed	Tax-payers	Net income tax assessed	Tax-payers	Net income tax assessed	Tax-payers	Net income tax assessed
\$	\$	No.	\$'000	No.	\$'000	No.	\$'000	No.
1-	599	135,021	1,397	135,021	1,422	131,879	1,341	125,849
600-	799	169,109	3,544	170,364	3,520	171,709	3,546	165,191
800-	999	185,467	6,742	172,733	6,311	167,120	6,132	162,961
1,000-	1,199	212,005	11,675	195,344	10,737	184,271	10,152	170,432
1,200-	1,399	225,548	17,161	210,000	16,039	195,401	14,966	179,330
1,400-	1,599	251,386	25,537	228,041	23,034	209,823	20,841	190,750
1,600-	1,799	262,711	33,715	249,694	32,141	228,329	28,849	203,195
1,800-	1,999	263,493	41,094	255,753	40,486	237,698	37,139	217,508
2,000-	2,199	260,362	47,385	254,830	47,369	246,669	46,192	229,209
2,200-	2,399	264,404	54,723	252,529	53,986	243,994	53,614	227,274
2,400-	2,599	266,931	61,362	251,985	60,644	243,829	61,193	226,008
2,600-	2,799	268,879	69,100	253,345	67,750	244,652	68,720	230,011
2,800-	2,999	259,121	73,878	249,760	74,460	239,232	74,007	229,094
3,000-	3,999	1,004,411	383,916	1,071,163	422,304	1,100,359	450,391	1,089,160
4,000-	5,999	685,068	452,924	877,478	592,676	1,060,822	737,150	1,284,172
6,000-	7,999	160,107	200,027	215,538	265,415	275,544	344,938	385,638
8,000-	9,999	56,364	113,167	72,276	140,707	89,392	175,662	127,980
10,000-	19,999	60,504	240,455	75,702	290,566	86,974	337,285	110,083
20,000-	29,999	7,148	70,465	8,875	85,763	10,462	100,957	12,212
30,000 and over		3,135	78,576	3,611	82,652	4,342	105,895	4,664
<b>Total</b>	<b>5,001,174</b>	<b>1,986,843</b>	<b>5,204,042</b>	<b>2,317,982</b>	<b>5,372,501</b>	<b>2,678,970</b>	<b>5,570,721</b>	<b>2,934,618</b>

(a) Actual income for 1967-68 to 1969-70; net income for 1970-71. Actual income is 'gross income including exempt income less expenditure incurred in gaining that income'. Net income is 'Total assessable income less total deductions for expenses incurred in gaining that income'.

### Partnerships and trusts

Income tax returns are required to be lodged on behalf of partnerships and trusts which, as partnerships and trusts, are not required to pay tax except in certain specified circumstances when they may be assessed as individuals. In general, the net income remaining, after allowing all deductions including expenditure incurred in gaining the income, is distributed to the partners or beneficiaries concerned and is assessable for tax in the respective individual returns.

The following table shows for the 1970-71 income year numbers, total business income and net income of partnerships and trusts. Greater detail is published in annual bulletin *Commonwealth Taxation Assessments*.

### PARTNERSHIPS AND TRUSTS—INCOME YEAR 1970-71

Item	Partnerships	Trusts	Total
Number . . . . .	399,434	107,685	507,119
Total business income . . . \$'000	5,970,244	79,016	6,049,260
Net income . . . . . \$'000	1,959,038	215,090	2,174,128

**Taxes on income—companies**

For taxation purposes companies are divided into two main groups—private and public. Broadly, a private company is defined as a company in which all the issued shares are held by not more than twenty persons, or which is capable of being controlled by not more than seven persons, and which is not a company in which the public is substantially interested, or is a subsidiary of a public company. All other companies are regarded as public companies. Both private and public companies pay primary tax assessed on a taxable income ascertained on the same principles as for individuals.

Dividends received are assessable income; resident companies, however, receive a rebate at the average rate on the amount of dividends included in the taxable income, while this rebate is not allowed to non-resident companies.

A private company is liable to pay additional tax upon the amount, if any, by which the dividends paid by the company within a prescribed period fall short of sufficient distribution as defined.

*Rates of tax.* The rates of primary income tax for all companies and additional tax for private companies applicable to income years 1959–60 to 1971–72 are shown in the following table.

**RATES OF INCOME TAX: COMPANIES, 1959-60 TO 1971-72 INCOME YEARS**  
(Cents per \$)

Income years ended June	Resident private company			Resident public company(a)		Non resident company			
	On taxable income		Additional tax on undistributed income	On taxable income		On dividends income		On other income	
	Up to \$10,000	On remainder		Up to \$10,000	On remainder	Up to \$10,000	On remainder	Up to \$10,000	On remainder
1960 to 1963	25	35	50	35	40	30	40	35	40
1964 to 1967	27.5	37.5	50	37.5	42.5	32.5	42.5	37.5	42.5
1968 and 1969	30	40	50	40	45	35	45	40	45
1970	32.5	42.5	50	42.5	47.5	37.5	47.5	42.5	47.5
1971 and 1972	37.5	42.5	50	47.5	47.5	42.5	47.5	47.5	47.5

(a) Excludes co-operative, non-profit and life insurance for which the rates of tax (in cents per \$) for 1971–72 income year were:

Type of company	Taxable income	
	Up to \$10,000	On remainder
Co-operative	42.5	47.5
Non-profit—Friendly societies' dispensaries	37.5	37.5
Other	42.5	47.5
Mutual life insurance	37.5	42.5
Other life insurance—Mutual income	37.5	42.5
Other income	47.5	47.5

A non-profit company is not liable to income tax unless the taxable income exceeds \$416. Where the non-profit company is a friendly society dispensary and the taxable income does not exceed \$1,664 the maximum amount payable is one-half of the excess over \$416 less any rebate or credit to which the company is entitled. Where the taxable income of a non-profit company other than a friendly society dispensary does not exceed \$1,830, the tax payable by the company is limited to 55 per cent of the amount by which the taxable income exceeds \$416 less any rebate or credit to which the company is entitled. Other companies are assessed for income tax if the taxable income is \$1 or more.



Details in respect of company income tax assessments for the 1970-71 income year are shown in the following table.

**COMMONWEALTH INCOME TAX ASSESSMENTS: RESIDENT AND NON-RESIDENT COMPANIES, BY GRADE OF INCOME AND OFFICE OF ASSESSMENT**

(Income derived in the year 1970-71)

Grade of taxable income(a) (\$) and office of assessment	Taxable			Non-taxable		
	Companies	Taxable income (a)	Net income tax assessed (b)	Companies	Taxable income (a)(c)	Loss(d)
Loss for year . . . . .	No.	\$'000	\$'000	No.	\$'000	\$'000
Nil . . . . .	..	..	..	48,509	..	451,347
1- 1,999 . . . . .	30,425	20,214	7,322	20,693	..	..
2,000- 9,999 . . . . .	36,979	204,629	72,615	4,545	3,472	..
10,000- 19,999 . . . . .	15,957	219,819	80,167	5,494	27,527	..
20,000- 39,999 . . . . .	8,423	234,632	87,718	1,747	24,464	..
40,000- 99,999 . . . . .	5,425	333,428	125,846	945	25,994	..
100,000- 199,999 . . . . .	2,126	294,476	109,805	541	33,034	..
200,000- 399,999 . . . . .	1,144	322,201	119,666	205	28,412	..
400,000- 999,999 . . . . .	770	474,966	166,732	99	26,486	..
1,000,000-1,999,999 . . . . .	263	364,427	124,442	57	32,266	..
2,000,000 and over . . . . .	259	1,639,100	558,803	9	12,527	..
				11	59,656	..
New South Wales . . . . .	44,748	1,563,830	552,212	35,419	100,508	204,857
Victoria . . . . .	29,424	1,770,485	620,967	20,515	110,221	139,341
Queensland . . . . .	10,215	281,762	99,355	8,277	12,616	29,988
South Australia . . . . .	8,042	214,081	78,331	8,070	14,169	27,241
Western Australia . . . . .	5,459	184,610	72,861	6,058	7,938	31,412
Tasmania . . . . .	1,807	46,984	16,622	1,618	2,151	5,454
Northern Territory . . . . .	533	9,705	3,749	409	836	3,123
Australian Capital Territory . . . . .	1,543	36,437	9,021	2,489	25,398	9,931
<b>Total . . . . .</b>	<b>101,771</b>	<b>4,107,892</b>	<b>1,453,116</b>	<b>82,855</b>	<b>273,838</b>	<b>451,347</b>

(a) Taxable income is the income remaining after deducting from assessable income all allowable deductions.  
 (b) Excludes additional tax on the undistributed income of private companies. (c) Net tax assessed is nil because of rebates.  
 (d) Not included in the figures shown for taxable income.

**Yield of income taxes**

*Income taxes collected.* The following table shows the net amounts of taxes collected and the proportions of the several components in the years 1967-68 to 1971-72.

## COMMONWEALTH INCOME TAXES COLLECTED: COLLECTION YEARS 1967-68 TO 1971-72

Source of income tax	1967-68	1968-69	1969-70	1970-71	1971-72
NET AMOUNTS COLLECTED (\$'000)					
Individuals—					
Instalments—salaries and wages . . . . .	1,507,456	1,727,290	2,084,219	2,432,062	2,888,547
Other payments . . . . .	669,949	652,176	773,917	746,075	880,037
Companies . . . . .	836,664	1,006,543	1,151,364	1,395,389	1,477,482
Withholding tax—Dividend . . . . .	21,716	28,303	38,003	35,956	42,002
Interest . . . . .	910	4,456	8,019	12,318	15,650
<b>Total . . . . .</b>	<b>3,036,695</b>	<b>3,418,768</b>	<b>4,055,523</b>	<b>4,621,800</b>	<b>5,303,717</b>
PERCENTAGES					
Individuals—					
Instalments—salaries and wages . . . . .	49.64	50.52	51.39	52.62	54.46
Other payments . . . . .	22.06	19.08	19.08	16.14	16.59
Companies . . . . .	27.55	29.44	28.39	30.19	27.86
Withholding tax—Dividend . . . . .	0.72	0.83	0.94	0.78	0.79
Interest . . . . .	0.03	0.13	0.20	0.27	0.30
<b>Total . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

*Income tax assessed.* The amounts of income tax covered by statistical analyses of assessments for recent years are shown in the following table. The amounts are shown under the year of income of the taxpayer. Tax is usually paid by companies in the year following the year of income. Individuals pay tax in the year of income, but there is usually an adjustment in the following year. Tax assessed after the close of the normal assessing period (fifteen months after the close of the income year for individuals and eighteen months for companies) is not included.

## COMMONWEALTH INCOME TAXES ASSESSED: INCOME YEARS 1966-67 TO 1970-71 (\$'000)

Tax	1966-67	1967-68	1968-69	1969-70	1970-71
Individuals—					
Residents . . . . .	1,834,154	1,985,293	2,316,451	} 2,678,970	2,934,618
Non-residents . . . . .	1,179	1,550	1,531		
Companies—					
Primary tax . . . . .	832,582	1,010,357	1,151,375	1,425,555	1,453,116
Additional tax on undistributed income of private companies . . . . .	2,934	6,648	4,384	3,699	n.a.
Superannuation Funds . . . . .	573	656	677	701	934
<b>Total . . . . .</b>	<b>2,671,422</b>	<b>3,004,504</b>	<b>3,474,418</b>	<b>4,108,925</b>	n.a.

*Refunds of revenue.* Income tax collections, as previously shown, are net amounts after refunds of revenue made in the course of the year. Refunds are of two types—those charged to special appropriations under authority of the Income Tax Assessment Act and those charged to special appropriations under authority of the Audit Act. Income tax instalment refunds, by far the greatest part of income tax refunds, are made when the instalments deducted during the year exceed the tax assessed on incomes for that year. Refunds made from special appropriations under section 37A of the Audit Act include refunds of moneys paid to the revenue in error, refunds of tax overpaid, refunds due to the amendment of assessments, etc. Refunds of income tax to individuals during the collection years 1967-68 to 1971-72 were: 1967-68, \$398,371,000; 1968-69, \$477,965,000; 1969-70, \$514,065,000; 1970-71, \$594,748,000, and 1971-72, \$697,057,000.

**Estate duty**

Under the *Estate duty Assessment Act 1914-1970* estate duty is assessed on the net value of the estate less a statutory exemption determined in accordance with the following formula: (a) where the whole of the estate passes to the widow, widower, children (including adopted children, step-children and ex-nuptial children) or grandchildren of the deceased person: (i) for qualifying estates of deceased primary producers—\$24,000; (ii) for other estates—\$20,000; decreasing by \$2 for every \$8 by which the value of the estate exceeds \$24,000 or \$20,000 as the case may be; (b) where no part of the estate passes to the relatives mentioned in (a): (i) for qualifying estates of deceased primary producers—\$12,000; (ii) for other estates—\$10,000; decreasing by \$2 for every \$8 by which the value of the estate exceeds \$12,000 or \$10,000 as the case may be; and (c) where part only of the estate passes to the relatives mentioned in (a): an amount calculated proportionately under (a) and (b) above.

As a general rule, the estate of a deceased primary producer would qualify for the higher level of statutory exemption if: (i) the death occurred on or after 25 September 1969; (ii) the deceased person was domiciled in Australia at the time of his death; (iii) during the period of five complete income tax years preceding death, more than one-half of the deceased person's gross income was derived from the carrying on by him of a primary production business in Australia; and (iv) the gross value of rural property in Australia—being land and certain other types of assets used in a primary production business such as livestock and agricultural plant—exceeded the gross value of all other property in the estate. In specified circumstances, dividends and certain other receipts from a family proprietary company in which a deceased person held shares may be treated as income derived from the carrying on by him of a primary production business and the value of the shares may be included, either wholly or in part, in the value of the estate's rural property.

Special exemptions are also allowed in respect of estates of defence personnel who die on active service or within three years of termination of their active service from injuries received or diseases contracted while on active service, and prescribed personal property held in Australia by certain United States personnel who are in Australia solely for purposes connected with projects of the United States Government.

A 'quick succession' rebate of estate duty may be allowable if the deceased was a beneficiary in an estate (upon which duty is payable or has been paid) of a person who pre-deceased him by not more than five years.

A 'rural property' rebate of part of any estate duty attributable to rural property included in the estate of a deceased primary producer may be allowable if the value of the estate (before deducting any statutory exemption) is less than \$250,000 and certain conditions are satisfied. The conditions are the same as those governing entitlements to higher levels of statutory exemptions for estates of deceased primary producers, as outlined in the explanations relating to statutory exemptions. If the value of a qualifying estate does not exceed \$140,000, the rebate is fifty per cent of any duty attributable to rural property in Australia. Rates of rebate gradually reducing from fifty per cent are applicable to estates having net values between \$140,000 and \$250,000.

The rates of duty have remained unchanged since 1941 and increase as the value of the estate for duty increases, as follows: does not exceed \$20,000, 3 per cent; \$20,001 to \$40,000, 3 per cent to 6 per cent; \$40,001 to \$240,000, 6 per cent to 26 per cent; \$240,001 to \$1,000,000, 26 per cent to 27.9 per cent; \$1,000,000 or more, 27.9 per cent.

Particulars of the number and value of dutiable estates and duty assessed, for each of the assessment years 1967-68 to 1971-72 are given in the following table.

COMMONWEALTH ESTATE DUTY ASSESSMENTS, 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
Estates . . . . . No.	14,489	14,105	16,358	16,502	18,505
Gross value as assessed . . . \$'000	840,226	841,462	1,068,213	993,610	1,045,418
Deductions(a) . . . . . "	168,106	162,834	222,953	168,396	192,017
Statutory exemption . . . . . "	155,800	152,206	170,755	179,419	209,377
Dutiable value . . . . . "	516,320	526,422	674,504	645,791	644,024
Net duty assessed . . . . . "	57,711	64,045	83,379	80,551	71,750
Average dutiable value . . . \$	35,635	37,322	41,234	39,134	34,803
Average duty assessed per estate \$	3,983	4,541	5,097	4,881	3,877

(a) Debts, Exempt Estate and State Probate Succession Duties.



### Gift duty

The *Gift Duty Act* 1941–1966 and the *Gift Duty Assessment Act* 1941–1967 impose a gift duty on gifts which are defined as dispositions of property made otherwise than by will, without adequate consideration in money or money's worth. There is a liability on both the donor and the donee to furnish a return, and both are jointly and severally liable for payment of the duty. However, if a return is furnished by the donor, the donee is relieved of this obligation.

Certain exemptions from duty are provided, the more important being: payments to an employees' superannuation or like fund; retiring allowances or gratuities granted to employees; gifts to organisations not carried on for the profit of any individual; gifts to the Commonwealth or a State; and small gifts not exceeding \$100.

The rate of gift duty applicable to any particular gifts is fixed by reference to the total value of all gifts made by the same donor within the period of eighteen months before and eighteen months after the time of making that gift. Where the total value of all gifts as defined does not exceed \$4,000 no duty is payable; The present rates of duty are (a) \$4,001 to \$20,000, 3 per cent provided that the gift duty payable shall not exceed one half of the amount by which the gift exceeds \$4,000 or a proportionate amount where more than one gift is involved; (b) \$20,001 to \$40,000, 3 per cent to 6 per cent; (c) \$40,001 to \$240,000, 6 per cent to 26 per cent; (d) \$240,001 to \$1,000,000 and over, 26 per cent to 27.9 per cent.

Particulars of the number of gift duty assessments, value of gifts as assessed and duty assessed for each of the assessment years 1967–68 to 1971–72 are given in the following table.

COMMONWEALTH GIFT DUTY ASSESSMENTS, 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
Assessments . . . No.	9,293	10,053	9,807	9,740	10,425
Value as assessed . . . \$'000	150,322	163,476	156,052	147,677	172,244
Duty assessed . . . „	8,701	9,501	8,399	7,796	9,878

### Australian Capital Territory Stamp Duty and Tax

*Stamp duty and tax* on a range of instruments and transactions connected with the Australian Capital Territory, including Jervis Bay, came into operation on 1 July 1969.

The *Australian Capital Territory Taxation (Administration) Act* 1969 provides for the administrative procedures necessary for assessment and collection of duty and tax.

Six additional Acts specify the range of dutiable instruments or transactions subject to duty or tax which are as under:

*Cheques and other bills of exchange and promissory notes:* Five cents on each.

*Hire purchase agreements:* 1½ per cent of the purchase price (if over \$100) after excluding any deposit and any terms or insurance charges.

*Insurance business:* Five per cent of premiums other than for life assurance, third party motor vehicles insurance or workers' compensation insurance.

*Sales and purchases of marketable securities:* Effected through a broker for full sale value; Up to \$100–7 cents for each \$25.00 or part thereof. Over \$100–30 cents for each \$100 or part thereof.

The rate applies to the sale price and/or purchase price payable by the seller and purchaser respectively.

Transfer of marketable securities not through a broker; 15 cents for every \$25.00 of the value or part thereof.

*Leases and realty:* Transfer of interest in Crown lease for a period of 5 years or realty: \$1.00 for every \$100 or part thereof of its value. Transfer of other leases: \$1.00 for every \$100 or part thereof of the consideration paid.

Grant of lease (not Crown lease): 30 cents for every \$100 rent or part thereof and if any other consideration not being rent—\$1.00 for every \$100 or part thereof of that other consideration.

A general exemption is provided from all duties for public hospitals, public benevolent institutions, religious institutions and public educational institutions. The total amount collected as Australian Capital Territory Stamp Duty and Tax was \$2,475,000 in 1970–71, \$2,561,000 in 1971–72 and \$3,589,000 in 1972–73.

### Customs duties

A description of the Commonwealth Customs Tariff System is given in Chapter 11, Overseas Transactions. Details of duties collected on the import of commodities classified in accordance with the "Brussels Nomenclature" are given in the following table.

**CUSTOMS DUTIES ACCORDING TO BRUSSELS TARIFF DIVISIONS, 1967-68 TO 1971-72**  
(\$'000)

<i>Brussels Tariff Division</i>	<i>Source of receipts</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
1	Live animals; animal products . . . . .	911	1,164	1,208	1,251	1,113
2	Vegetable products . . . . .	1,268	1,831	2,536	1,442	1,506
3	Animal and vegetable fats and oils and their cleavage products; prepared edible fats; animal and vegetable waxes . . . . .	1,578	1,191	2,541	1,987	1,183
4	Prepared foodstuffs; beverages, spirits and vinegar; tobacco . . . . .	51,278	53,742	60,572	64,215	69,961
5	Mineral products . . . . .	5,688	5,606	8,992	13,715	7,720
6	Products of the chemical industry and allied industries . . . . .	11,438	12,995	13,999	16,002	14,611
7	Artificial resins and plastic materials, cellu- lose esters and ethers, and articles thereof; rubber, synthetic rubbers, factice and articles thereof . . . . .	15,457	16,838	19,719	22,388	20,946
8	Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travel goods, handbags and similar con- tainers; articles of gut (other than silk- worm gut) . . . . .	2,688	2,906	3,495	3,842	4,349
9	Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, of esparto and of other plaiting materials; basketware and wickerwork . . . . .	8,111	7,941	8,741	9,182	9,024
10	Paper-making material; paper and paper- board and articles thereof . . . . .	8,437	9,778	10,977	11,353	11,161
11	Textiles and textile articles . . . . .	44,447	46,865	52,409	59,129	68,920
12	Footwear, headgear, umbrellas, sunshades, whips, riding-crops and parts thereof; prepared feathers and articles made there- with; artificial flowers; articles of human hair; fans . . . . .	5,760	6,658	9,727	10,437	11,741
13	Articles of stone, of plaster, of cement, of asbestos, of mica and of similar materials; ceramic products; glass and glassware . . . . .	8,343	9,418	11,379	11,193	11,975
14	Pearls, precious and semi-precious stones, precious metals, rolled precious metals, and articles thereof; imitation jewellery; coin . . . . .	1,375	1,344	1,849	1,997	2,000
15	Base metals and articles of base metal . . . . .	21,303	24,659	27,949	34,315	28,240
16	Machinery and mechanical appliances; elec- trical equipment; parts therefor . . . . .	55,172	65,506	85,255	98,229	96,536
17	Vehicles, aircraft, and parts thereof; vessels and certain associated transport equipment . . . . .	39,212	46,270	54,920	64,353	66,191
18	Optical, photographic, cinematographic measuring, checking, precision, medical and surgical instruments and apparatus; clocks and watches, musical instruments; sound recorders and reproducers; television image and sound recorders and re- producers, magnetic; parts therefor . . . . .	11,141	12,246	14,440	15,786	16,174
19	Arms and ammunition; parts therefor . . . . .	327	334	459	483	348
20	Miscellaneous manufactured articles . . . . .	8,684	9,438	11,123	11,656	12,225
21	Works of art, collectors' pieces and antiques Miscellaneous . . . . .	3	13	10	12	-31
	Primage . . . . .	3,970	4,195	5,132	6,750	7,412
		5,668	5,341	6,142	6,285	5,457
	<i>Total customs duties and primage . . . . .</i>	<i>312,258</i>	<i>346,281</i>	<i>413,573</i>	<i>466,003</i>	<i>468,761</i>
	<i>Less Remission of duty under special circumstances . . . . .</i>	<i>38</i>	<i>17</i>	<i>14</i>	<i>15</i>	<i>29</i>
	<b>Total . . . . .</b>	<b>312,220</b>	<b>346,264</b>	<b>413,559</b>	<b>465,989</b>	<b>468,732</b>

**Excise duties**

Details of duties collected in relation to the production of specific commodities are given in the following table.

**COMMONWEALTH EXCISE REVENUE: CLASSIFICATION OF NET RECEIPTS**  
**1967-68 TO 1971-72**  
 (\$'000)

<i>Source of revenue</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Beer . . . . .	338,614	355,001	369,937	382,479	398,330
Potable spirits . . . . .	26,783	24,440	26,525	25,923	27,180
Tobacco . . . . .	16,460	15,711	14,799	15,450	16,976
Cigars and cigarettes . . . . .	214,315	225,262	230,620	257,034	290,257
Cigarette papers . . . . .	836	833	814	859	908
Petrol . . . . .	234,142	253,007	266,627	328,584	422,415
Diesel fuel . . . . .	18,256	21,520	23,852	30,815	38,107
Matches . . . . .	2,227	2,384	2,346	2,289	2,442
Playing cards . . . . .	121	127	136	134	149
Grape wine . . . . .	..	..	..	8,702	11,511
Coal . . . . .	642	820	1,157	1,436	1,777
Canned fruit . . . . .	1,738	1,698	315	333	303
Miscellaneous . . . . .	1,121	1,625	2,168	-421	2,761
<i>All items</i> . . . . .	<i>855,255</i>	<i>902,428</i>	<i>939,295</i>	<i>1,053,617</i>	<i>1,213,118</i>
Diesel fuel taxation . . . . .	304	274	351	425	481
Less rebates . . . . .	356	352	355	567	668
	-52	-78	-4	-142	-187
Other rebates . . . . .	-34	-43	-7	-15	-7
<b>Total</b> . . . . .	<b>855,168</b>	<b>902,307</b>	<b>939,283</b>	<b>1,053,460</b>	<b>1,212,925</b>

The quantities of commodities on which excise duty were paid are given in Chapter 11, Overseas Transactions, page 315.

**Sales Tax**

The general rate of tax levied on all goods other than those specified in the schedules to the *Sales Tax (Exemptions and Classifications) Act* 1935-1970 is 15 per cent and goods subject to special rates are taxed at either 2.5 per cent or 27.5 per cent. Prior to 19 August 1970 these special rates were 2.5 per cent and 25 per cent.

Particulars of the net amount of sales tax payable and the sales of taxable and exempt goods in each State for 1971-72 are given in the following table. The figures relate to sales during the period 1 July to 30 June. The figures for sales tax payable differ from those for net collections shown on page 566 because the latter include some adjustments in respect of earlier tax years and relate to tax payable on returns lodged during the year, which in general cover sales for the period June to May.

**COMMONWEALTH SALES TAX AND AMOUNT OF SALES: STATES AND TERRITORIES**  
**1971-72**  
 (\$'000)

	<i>N.S.W. (including A.C.T.)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
Net sales on which sales tax was payable at—								
2.5 per cent . . . . .	355,981	314,156	107,604	65,366	59,489	16,585	1,014	920,195
15 per cent . . . . .	981,995	630,304	279,626	150,501	166,425	34,775	5,383	2,249,010
27.5 per cent . . . . .	488,817	323,458	139,179	93,209	87,280	24,129	2,143	1,158,216
<i>Total net sales</i>	<i>1,826,794</i>	<i>1,267,918</i>	<i>526,409</i>	<i>309,076</i>	<i>313,193</i>	<i>75,489</i>	<i>8,540</i>	<i>4,327,420</i>
Sales of exempt goods by registered persons . . . . .	4,448,868	2,790,636	1,628,133	750,766	775,173	261,794	45,008	10,700,379
<b>Total sales of taxable and exempt goods</b>	<b>6,275,662</b>	<b>4,058,554</b>	<b>2,154,542</b>	<b>1,059,842</b>	<b>1,088,367</b>	<b>337,283</b>	<b>53,548</b>	<b>15,027,799</b>
Sales tax payable . . . . .	290,624	191,350	82,908	49,842	50,453	12,266	1,422	678,866



Sales of taxable and exempt goods and sales tax payable for Australia are shown in the following table for the years 1967-68 to 1971-72.

**COMMONWEALTH SALES TAX AND AMOUNT OF SALES**  
**AUSTRALIA, 1967-68 TO 1971-72**  
(\$ million)

<i>Year of sale</i>	<i>Net sales on which sales tax was payable</i>	<i>Sales of exempt goods by registered persons</i>	<i>Total sales of taxable and exempt goods</i>	<i>Sales tax payable</i>
1967-68 . .	3,095	8,394	11,489	424
1968-69 . .	3,367	8,933	12,300	498
1969-70 . .	3,810	9,759	13,569	577
1970-71 . .	4,097	10,141	14,238	637
1971-72 . .	4,327	10,700	15,028	679

In the foregoing tables, sales include goods transferred to stock for sale by retail, goods imported by persons other than registered taxpayers, and goods used in the business of the taxpayer. Exempt sales relate to goods exempted from sales tax under the *Sales Tax (Exemptions and Classifications) Act* 1935-1970. The figures shown do not represent the total sales of all commodities, as vendors trading only in exempt goods are not required to be registered, and consequently the volume of their sales is not included in the statistics above. In addition, non-taxable sales (i.e. goods sold by one registered taxpayer to another registered taxpayer) are excluded.

#### Primary production taxes and charges

The following section shows current rates of charges, and receipts from, primary production and other charges during the years 1967-68 to 1971-72. Further information relating to primary production charges is given in Chapter 22, Rural Industry.

*Wheat export charge and wheat tax.* For details see Chapter 22, Rural Industry.

*Wool tax.* The rate of wool tax applicable to transactions in wool in the period 1 August 1970 to 30 June 1973 was 1 per cent. On 3 April 1973 the Government announced its intention to increase the rate for the 1973-74 financial year to 2.4 per cent.

*Miscellaneous export charges.* These consist of charges levied on exports of apples and pears (*Apple and Pear Export Charges Act* 1928-1968), canned fruits (*Canned Fruits Export Charges Act* 1926-1966), dried fruits (*Dried Fruits Export Charges Act* 1924-1970), and eggs (*Eggs Export Charges Act* 1947-1965).

*Tobacco charge.* The rates of tobacco charge currently in force are as follows:

- (a) in respect of leaf grown in Australia and sold to a manufacturer:
  - (i) 1.1 cents per kilogram of leaf, payable by the grower or other persons who own the leaf immediately before sale, and
  - (ii) 2.2 cents per kilogram of leaf, payable by the manufacturer;
- (b) in respect of leaf grown and used by grower-manufacturers:
  - (i) where the manufacturer grows nine-tenths of the Australian tobacco leaf used by him—1.1 cents per kilogram of leaf,
  - (ii) in other cases—2.2 cents per kilogram of leaf.

(See also Chapter 22, Rural Industry.)

*Butter fat levy.* The *Butter Fat Levy Act* 1965-66 provides for a maximum rate of \$0.48 per hundredweight of butterfat content of specified dairy produce and for the apportionment of the proceeds between overseas marketing (50 per cent) and local promotion (50 per cent). (See also Chapter 22, Rural Industry.)

*Dairy Research Levy.* The *Dairying Research Levy Act* 1972 came into operation on 1 July 1972. It imposes a levy on all whole milk produced in Australia and is payable either on a butterfat or gallonage basis, according to the normal method of payment to producer by the purchaser. The present operative rates of levy are 10 cents per hundredweight butterfat or 0.033 cents per gallon milk.

*Canning-fruit charge.* The present rate of canning-fruit charge is \$1.00 per ton of fruit. This rate has operated since 10 December 1970.

*Honey levy.* The current rate of levy on honey sold for domestic consumption in Australia is 0.5 cents per pound.

*Livestock slaughter levy.* The present operative rate of levy for cattle is 46 cents per head of which 25 cents is for beef research, 1 cent for research into the meat processing industry and 20 cents to finance the operations of the Australian Meat Board. For sheep and lambs the levy is 3.85 cent per head and the components are 1.75 cents for sheep meat research, 0.1 cents for research into the meat processing industry and 2.00 cents for the Australian Meat Board.

*Poultry industry levy.* The rates of levy for each hen kept for commercial purposes (the first twenty hens being exempt) were 4.0 cents per fortnight from 1 July 1971 to 8 June 1972, nil per fortnight from 9 June 1972 to 30 June 1972 and 4.0 cents per fortnight from 1 July 1972.

*Meat chicken levy.* The rate of levy is 10 cents per hundred meat chickens hatched, payable by any hatchery with 20,000 chickens or more.

*Pig slaughter levy.* The present operative rate of levy is 5 cents for each pig slaughtered for human consumption.

*Wine grapes charges.* The *Wine Grapes Charges Act* 1929–1969 imposes a levy, which is payable by the owner of a winery or distillery, on all grapes delivered to that winery for use in the manufacture of wine. No charge is payable unless 10 tons or more of grapes have been used in the manufacture of wine during a season. The operative rate of charge as from 25 January 1973 is \$2.40 per tonne of fresh grapes and \$7.20 in respect of dried grapes.

*Dried wine fruits levy.* The *Dried Vines Fruits Levy Act* 1971 imposes a levy on dried vine fruits where the average return for a season exceeds by more than \$10 the amount per ton that constitutes the base price for that season, with a maximum of \$20 per ton.

*Apple and pear stabilisation export duty.* The *Apple and Pear Stabilisation Export Duty Act* 1971 imposes an export duty on the exportation on consignment of fruit of a season where the average export return for a season exceeds the support price for that season. The maximum rate of export duty is 80 cents per reputed bushel.

*Dried fruits levy.* The *Dried Fruits Levy Act* 1971 imposes a levy on dried fruits of a season received for packing. The rate of levy is in the case of dried vine fruits 50 cents per ton and in the case of dried tree fruits \$2.50 per ton.

**COMMONWEALTH PRIMARY PRODUCTION TAXES AND CHARGES  
RECEIPTS, 1967-68 TO 1971-72  
(\$'000)**

Source of revenue	1967-68	1968-69	1969-70	1970-71	1971-72
Apple and pear export charge . . . . .	211	280	318	385	408
Butter fat levy . . . . .	1,936	1,956	2,189	2,184	2,133
Canned fruit export charge . . . . .	326	330	208	427	342
Canning fruit charge . . . . .	123	164	99	218	171
Dried fruits export charge . . . . .	143	139	82	232	267
Dried fruits levy . . . . .	..	..	..	..	46
Dried vine fruits contributory charge—					
Currants . . . . .	..	25	44	..	..
Raisins . . . . .	42	..	..	..	..
Sultanas . . . . .	139	..	..	..	..
Egg export charge . . . . .	4	4	4	4	4
Honey levy . . . . .	96	106	103	108	122
Livestock slaughter levy—					
Cattle . . . . .	1,314	1,351	1,557	1,811	2,432
Pigs . . . . .	..	..	..	..	144
Sheep and lambs . . . . .	1,063	1,027	1,229	1,409	1,932
Chicken meat levy . . . . .	..	..	68	114	118
Poultry industry levy . . . . .	10,840	10,785	11,117	12,819	13,038
Tobacco charge . . . . .	427	313	539	502	567
Wheat tax . . . . .	633	1,276	788	607	712
Wine grapes charge . . . . .	357	379	449	534	513
Wool tax . . . . .	13,694	15,272	14,028	5,567	5,496
Other . . . . .	302	265	311	377	391
<b>Total . . . . .</b>	<b>31,649</b>	<b>33,674</b>	<b>33,133</b>	<b>27,300</b>	<b>28,836</b>

**Pay-roll tax**

Commonwealth pay-roll tax came into operation on 2 May 1941 and provided for the imposition of a tax on wages paid or payable in respect of any period of time occurring after 30 June 1941. The tax was payable by employers on all wages and salaries paid or payable in excess of a general exemption. The rate of tax, 2.5 per cent, was unchanged since its inception but the general exemption was increased over the years from \$173.33 to \$1,733.33 per month (\$2,080 per annum to \$20,800 per annum).

From 1 September 1971, in accordance with an agreement between the Commonwealth and the States following the June 1971 Premiers' Conference, the Commonwealth vacated the pay-roll tax field in favour of the States. The Commonwealth continued, however, to impose pay-roll tax in the two internal Commonwealth Territories, i.e. the Australian Capital Territory and the Northern Territory. The laws relating to pay-roll tax in the Territories are the *Pay-roll Tax (Territories) Assessment Act 1971* and the *Pay-roll Tax (Territories) Act 1971*.

The rate of tax payable in the Territories is 2.5 per cent with a statutory exemption of wages up to \$1,733.33 per month (\$20,800 per annum) or a proportion of that amount in the case of an employer who is an employer also in a State.

On vacating the pay-roll tax field in favour of the States the Commonwealth introduced an export incentive grant scheme to provide grants in respect of the 1971-72 and 1972-73 financial years equal to the rebates which would have been payable for those years if the pay-roll tax rebate scheme which had operated from the 1960-61 financial year had continued in operation until it was due to expire on 30 June 1973.

Gross collections of pay-roll tax in 1971-72 amounted to \$99,070,028. Refunds of pay-roll tax during 1971-72 under the payroll tax rebate scheme amounted to \$58,674,224 (\$50,674,224 under the export incentive grant scheme). For details of the pay-roll tax rebate scheme, see page 553 of the Official Year Book No. 57.

**Other Commonwealth taxation**

*Stevedoring Industry Charge.* The rates in operation since 10 February 1972 have been as follows:

Class of Waterside Worker			Rate \$
A	..	..	1.00 per man-hour
B	..	..	1.20 per man-hour
C	..	..	0.82 per man-hour

Class A waterside workers are regular waterside workers on weekly hire in permanent and non-permanent continuous ports. Class B are regular casual workers in non-permanent continuous ports and Class C are regular casual workers in non-continuous and seasonal ports and irregular workers in all ports.

*Broadcasting listeners and television viewers' licences.* Information relating to the various classes of licence, and the fees currently applicable to each, is given in Chapter 12, Transport, Communication and Travel, page 390.

**Taxes levied in the Territories**

*Northern Territory.* Taxes levied by the Commonwealth in the Northern Territory in the years 1967-68 to 1971-72 were as follows.

NORTHERN TERRITORY: TAXATION BY TYPE OF TAX, 1967-68 TO 1971-72  
(\$'000)

Type of tax	1967-68	1968-69	1969-70	1970-71	1971-72
Rates on land . . . .	404	450	547	683	950
Vehicle registration fees . . . .	301	485	549	607	735
Drivers', etc., licences(a) . . . .	20	32	37	40	49
Liquor taxes(a) . . . .	72	89	120	366	443
Racing taxes . . . .	29	33	48	96	112
Licences and registration fees n.e.i. . . .	22	49	32	31	37
Stamp duties . . . .	73	86	94	176	158
Other taxes, fees, fines, etc. . . .	63	74	92	258	340
<b>Total taxation . . . .</b>	<b>984</b>	<b>1,299</b>	<b>1,520</b>	<b>2,257</b>	<b>2,824</b>

(a) Estimated.



*Australian Capital Territory.* Taxes levied by the Commonwealth in the Australian Capital Territory in the years 1967-68 to 1971-72 were as follows.

**AUSTRALIAN CAPITAL TERRITORY: TAXATION BY TYPE OF TAX, 1967-68 TO 1971-72**  
(\$'000)

Type of tax . . . . .	1967-68	1968-69	1969-70	1970-71	1971-72
Rates on land . . . . .	641	619	749	1,383	4,362
Vehicle registration fees . . . . .	694	747	830	937	1,090
Drivers', etc., licences . . . . .	65	142	81	101	129
Liquor taxes . . . . .	226	259	287	340	390
Licences and registration fees n.e.i. . . . .	89	115	137	150	181
Stamp duties . . . . .	..	..	1,969	2,475	2,561
Charges on conveyances of interests in land(a) . . . . .	298	383	..	..	..
Other taxes, fees, fines, etc. . . . .	32	25	25	22	12
<b>Total taxation . . . . .</b>	<b>2,045</b>	<b>2,290</b>	<b>4,079</b>	<b>5,408</b>	<b>8,725</b>

(a) These charges have been levied in the form of stamp duty from 1969-70 onwards.

Rates on land and stamp duties (*see also* page 578) are the principal taxes levied in the Australian Capital Territory.

#### Gross operating surplus of public enterprises

The *gross operating surplus* of public *trading* enterprises is the excess over working expenses of total revenue from charges before providing for capital consumption and other costs of capital (i.e. interest, debt redemption). *Financial* enterprises do not charge directly, at least not in full, for the services they render; that expenditure is largely financed by net receipts of interest and other transfer income. By convention, the output of these enterprises is valued at cost, so that no operating surplus is recorded in their production accounts. The profits of these enterprises are attributable to their property income. *Income* (including depreciation) of public financial enterprises is therefore arrived at after deducting interest paid and working expenses (i.e. net current expenditure on goods and services) from total receipts of interest and non-dwelling rent.

In the following table the revenue, working expenses and gross operating surplus of public trading enterprises are shown; public financial enterprises are reflected simply on the basis of their income (including depreciation). Further information relating to the more important of these enterprises may be found in the chapters dealing with banking, housing, railways, electric power generation, etc.

## REVENUE, WORKING EXPENSES AND GROSS OPERATING SURPLUS OF COMMONWEALTH PUBLIC ENTERPRISES

(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72 <sup>p</sup>
REVENUE					
Development of resources and assistance to industry—					
Water supply, sewerage and irrigation . . . . .	1.8	1.6	2.1	2.0	
Other . . . . .	2.2	2.4	2.6	21.7	
Total development, etc. . . . .	4.0	4.0	4.8	23.7	
Manufacturing . . . . .	8.7	12.1	11.4	11.8	
Transport and communication—					
Post office . . . . .	502.7	567.2	625.2	715.6	
Railways . . . . .	22.2	25.4	27.6	29.0	
Other . . . . .	288.3	335.6	400.6	449.5	not available
Total transport, etc. . . . .	813.2	928.2	1,053.5	1,194.1	
Power, fuel and light . . . . .	29.6	32.8	36.1	48.6	
Housing . . . . .	26.4	27.1	32.6	38.0	
Insurance . . . . .	1.4	1.9	2.2	2.4	
Banks . . . . .	58.8	64.6	79.6	90.5	
Other . . . . .	4.8	11.6	13.2	15.7	
Total revenue . . . . .	946.9	1,082.3	1,233.4	1,424.8	

## WORKING EXPENSES(a)

Development of resources and assistance to industry—					
Water supply, sewerage and irrigation . . . . .	1.9	1.8	1.8	2.0	
Other . . . . .	2.0	2.0	2.3	17.1	
Total development, etc. . . . .	3.9	3.8	4.1	19.1	
Manufacturing . . . . .	8.2	9.3	9.2	10.9	
Transport and communication—					
Post office . . . . .	332.9	358.0	401.4	464.7	
Railways . . . . .	18.4	20.9	23.0	24.9	
Other . . . . .	230.0	260.8	311.3	377.0	not available
Total transport, etc. . . . .	581.3	639.6	735.6	866.6	
Power, fuel and light . . . . .	6.6	7.9	9.8	11.6	
Housing . . . . .	23.1	24.1	28.2	30.9	
Insurance . . . . .	1.4	1.5	1.6	1.6	
Other . . . . .	4.9	10.1	11.1	12.5	
Total working expenses . . . . .	629.4	696.4	799.7	953.2	

## GROSS OPERATING SURPLUS

Development of resources and assistance to industry—					
Water supply, sewerage and irrigation . . . . .	-0.1	-0.2	0.3	..	1.1
Other . . . . .	0.1	0.4	0.4	4.6	-17.0
Total development, etc. . . . .	0.1	0.2	0.7	4.6	-15.9
Manufacturing . . . . .	0.5	2.8	2.2	0.9	..
Transport and communication—					
Post office . . . . .	169.8	209.2	223.9	250.9	338.3
Railways . . . . .	3.8	4.5	4.6	4.0	1.1
Other . . . . .	58.3	74.8	89.3	72.6	73.9
Total transport, etc. . . . .	231.9	288.5	317.8	327.5	413.3
Power, fuel and light . . . . .	22.9	24.9	26.3	37.0	36.9
Housing . . . . .	3.4	3.0	4.4	7.1	7.3
Insurance . . . . .	..	0.4	0.6	0.9	0.6
Banks . . . . .	58.8	64.6	79.6	90.5	103.1
Other . . . . .	-0.1	1.4	2.1	3.2	3.6
Total gross operating surplus . . . . .	317.4	385.9	433.7	471.6	548.9

(a) Excludes depreciation and interest charges.

## STATE AUTHORITIES

The State authorities dealt with in this section include the central government of each State, statutory bodies created by or under State legislation to carry out activities on behalf of the central government, and incorporated organisations in which individual State governments have a controlling interest.

The transactions of many of the State authorities are itemised in State Consolidated Revenue Funds or in Trust Funds, so that a satisfactory coverage of their transactions can be obtained from a detailed analysis and reclassification of the published accounts whose receipts and payments are summarised in the statement of Treasury balances for each State. The remaining statutory bodies and other publicly owned or controlled organisations maintain accounts entirely, or largely separate from the public accounts although there may be transactions between them and State governments (such as advances and capital contributions, interest and dividends, and votes for running expenses and capital works) which would affect the public accounts. The accounting reports of this group of organisations have to be collected and analysed in order to present a complete statement of the transactions of State authorities—or at least methods of analysis need to be adopted which adequately reflect their transactions so that they are, in principle, covered by the statistics. In the figures which follow in this section all expenditure by State central government authorities on certain institutions, whether direct (e.g. new building charged to Loan Fund) or indirectly by way of current or capital grants to the bodies administering them, has been treated as final expenditure on goods and services by State authorities; fees and gifts from persons or private businesses to these institutions are not included, and neither is the expenditure of the institutions from their own resources. Universities and hospitals are particular examples of organisations for which this practice has been adopted.

Many of these State authorities have been granted autonomy by State legislatures to the extent that they are largely financially independent. Some of these are funded from earmarked tax revenues and are vested with independent borrowing powers. A considerable number of others belong to the category of public enterprises, since they are able to charge for their services so as to cover their costs of operation. These bodies have usually been created to control a specific activity or provide a specific service within a State. It is often the case that in other States similar activities are carried out, or services are provided, by central government or local authorities. Details of the activities of autonomous or semi-autonomous State authorities engaged in construction and maintenance of roads and bridges, provision of water supply and sewerage services, and harbour facilities, are given in the last part of this chapter. Information on the activities of other State authorities engaged in such fields as transport, electricity and gas, housing and banking may be found in chapters relevant to those subjects.

Details of the transactions of State authorities are given in the tables which follow. These figures have been prepared on a national accounting basis, and arranged in a form of presentation which is compatible with the figures given earlier for Commonwealth authorities. The figures are generally consistent with those given for State and local authorities in *Australian National Accounts*, 1971–72. Reference should be made to the introduction of *Public Authority Finance*, 1969–70, for definitions and descriptions of items appearing in these tables, and also for further details of the organisations covered by the figures. However because of the preliminary nature of the 1971–72 information at the time of compilation of the statistics State dissections have been shown only for 1970–71.

Additional information relating to the activities of the State authorities may also be found in the Year Books of the individual States.



## Receipts and outlay

The receipts and outlay of State authorities for the five year period ended 1971-72 are given in the following table.

STATE AUTHORITIES(a): RECEIPTS AND OUTLAY, 1967-68 TO 1971-72  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
RECEIPTS					
Current receipts—					
Taxes, fees, fines, etc. . . . .	753.3	859.9	960.2	1,007.9	1,414.4
Income from public enterprises . . . . .	328.9	348.8	391.0	362.6	366.6
Interest, etc., received . . . . .	130.5	144.0	170.2	207.8	209.8
Grants from Commonwealth . . . . .	1,056.8	1,150.0	1,309.0	1,652.0	1,746.6
<i>Total current receipts . . . . .</i>	<i>2,269.5</i>	<i>2,507.7</i>	<i>2,830.4</i>	<i>3,230.3</i>	<i>3,737.4</i>
Capital receipts—					
Depreciation allowances . . . . .	164.6	186.6	210.9	207.7	231.0
Net borrowing—					
Government securities—					
Australia . . . . .	544.1	528.1	562.5	427.2	615.9
Overseas . . . . .	-76.3	-24.1	-88.6	-51.7	-77.6
Public corporation securities . . . . .	217.5	262.1	242.5	312.9	318.0
Advances from Commonwealth . . . . .	169.8	112.7	176.3	150.9	36.5
Grants from Commonwealth . . . . .	254.9	263.9	311.4	554.3	625.8
Other funds available (including errors and omissions) . . . . .	29.5	23.0	30.5	43.0	23.0
<i>Total capital receipts . . . . .</i>	<i>1,304.1</i>	<i>1,352.3</i>	<i>1,445.5</i>	<i>1,644.3</i>	<i>1,772.6</i>
Reduction in cash and bank balances . . . . .	-77.2	-53.2	-33.3	-66.1	-44.1
<b>Total receipts . . . . .</b>	<b>3,496.4</b>	<b>3,806.8</b>	<b>4,242.6</b>	<b>4,808.5</b>	<b>5,465.9</b>
OUTLAY					
Current outlay—					
Net current expenditure on goods and services . . . . .	1,322.7	1,483.7	1,717.5	2,070.5	2,451.3
Interest, etc., paid . . . . .	554.6	604.0	664.2	721.4	804.1
Cash benefits to persons . . . . .	28.7	35.2	40.6	46.7	57.5
Subsidies . . . . .	14.9	15.5	20.8	15.9	16.0
Grants for private capital purposes . . . . .	18.3	14.3	18.4	14.9	15.7
Grants to local authorities . . . . .	57.5	59.9	57.0	68.7	81.0
<i>Total current outlay . . . . .</i>	<i>1,996.7</i>	<i>2,212.6</i>	<i>2,518.5</i>	<i>2,938.1</i>	<i>3,425.6</i>
Capital outlay—					
Expenditure on new fixed assets . . . . .	1,369.4	1,505.7	1,604.3	1,697.1	1,881.3
Expenditure on existing assets . . . . .	7.7	-3.2	14.3	29.8	29.6
Increase in stocks . . . . .	-11.1	4.9	6.3	15.8	10.3
Advances to local authorities . . . . .	6.7	6.7	9.3	5.3	7.0
Advances to other sectors . . . . .	127.1	80.0	90.0	122.4	112.1
<i>Total capital outlay . . . . .</i>	<i>1,499.8</i>	<i>1,594.1</i>	<i>1,724.2</i>	<i>1,870.4</i>	<i>2,040.3</i>
<b>Total outlay . . . . .</b>	<b>3,496.4</b>	<b>3,806.8</b>	<b>4,242.6</b>	<b>4,808.5</b>	<b>5,465.9</b>

(a) Excluding financial enterprises.

The following table provides details of the receipts and outlay of State authorities in each of the six States for the year 1970-71.

STATE AUTHORITIES(a): RECEIPTS AND OUTLAY, BY STATE, 1970-71  
(\$ million)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
RECEIPTS							
Current receipts—							
Taxes, fees, fines, etc.	410.7	304.3	122.7	71.1	76.8	22.4	1,007.9
Income from public enterprises	125.4	113.6	42.0	42.6	24.3	14.9	362.6
Interest, etc., received	63.9	46.7	28.4	19.1	40.1	9.7	207.8
Grants from Commonwealth	543.4	407.7	253.8	177.7	181.9	87.5	1,652.0
<i>Total current receipts</i>	<i>1,143.3</i>	<i>872.2</i>	<i>446.8</i>	<i>310.5</i>	<i>323.0</i>	<i>134.5</i>	<i>3,230.3</i>
Capital receipts—							
Depreciation allowances	88.7	55.5	23.3	16.0	18.2	5.9	207.7
Net borrowing—							
Government securities—							
Australia	163.3	91.6	51.8	46.7	44.4	29.5	427.2
Overseas	—33.0	—5.2	—2.4	—6.5	—3.2	—1.3	—51.7
Public corporation securities	77.0	129.7	66.0	16.6	15.3	8.4	312.9
Advances from Commonwealth	44.7	39.2	12.7	26.5	16.6	11.3	150.9
Grants from Commonwealth	170.5	122.9	94.9	65.6	72.8	27.6	554.3
Other funds available (including errors and omissions)	7.5	12.4	21.7	—5.2	5.6	1.1	43.0
<i>Total capital receipts</i>	<i>518.6</i>	<i>446.1</i>	<i>267.9</i>	<i>159.7</i>	<i>169.7</i>	<i>82.4</i>	<i>1,644.3</i>
Reduction in cash and bank balances	—13.8	—25.9	—25.4	—2.4	2.3	—1.0	—66.1
<i>Total receipts</i>	<i>1,648.1</i>	<i>1,292.4</i>	<i>689.4</i>	<i>467.8</i>	<i>495.0</i>	<i>216.0</i>	<i>4,808.5</i>
OUTLAY							
Current outlay—							
Net current expenditure on goods and services	773.1	538.5	284.8	182.3	205.2	86.6	2,070.5
Interest, etc., paid	216.1	220.3	96.7	85.9	61.3	41.0	721.4
Cash benefits to persons	23.5	6.0	7.0	4.3	4.7	1.2	46.7
Subsidies	7.5	1.7	5.1	0.2	1.0	0.3	15.9
Grants for private capital purposes	4.1	5.2	2.3	2.2	0.7	0.4	14.9
Grants to local authorities	27.2	2.7	26.8	4.8	7.7	—0.4	68.7
<i>Total current outlay</i>	<i>1,051.5</i>	<i>774.5</i>	<i>422.7</i>	<i>279.7</i>	<i>280.6</i>	<i>129.2</i>	<i>2,938.1</i>
Capital outlay—							
Expenditure on new fixed assets	533.4	481.4	246.1	160.9	198.2	77.2	1,697.1
Expenditure on existing assets	10.0	8.2	0.8	5.3	5.5	..	29.8
Increase in stocks	8.8	—1.8	2.5	5.1	0.2	1.0	15.8
Advances to local authorities	0.3	0.5	3.2	—0.3	..	1.6	5.3
Advances to other sectors	44.0	29.6	14.1	17.1	10.6	7.0	122.4
<i>Total capital outlay</i>	<i>596.5</i>	<i>518.0</i>	<i>266.7</i>	<i>188.1</i>	<i>214.4</i>	<i>86.8</i>	<i>1,870.4</i>
<i>Total outlay</i>	<i>1,648.1</i>	<i>1,292.4</i>	<i>689.3</i>	<i>467.8</i>	<i>495.0</i>	<i>216.0</i>	<i>4,808.5</i>

(a) Excluding financial enterprises.

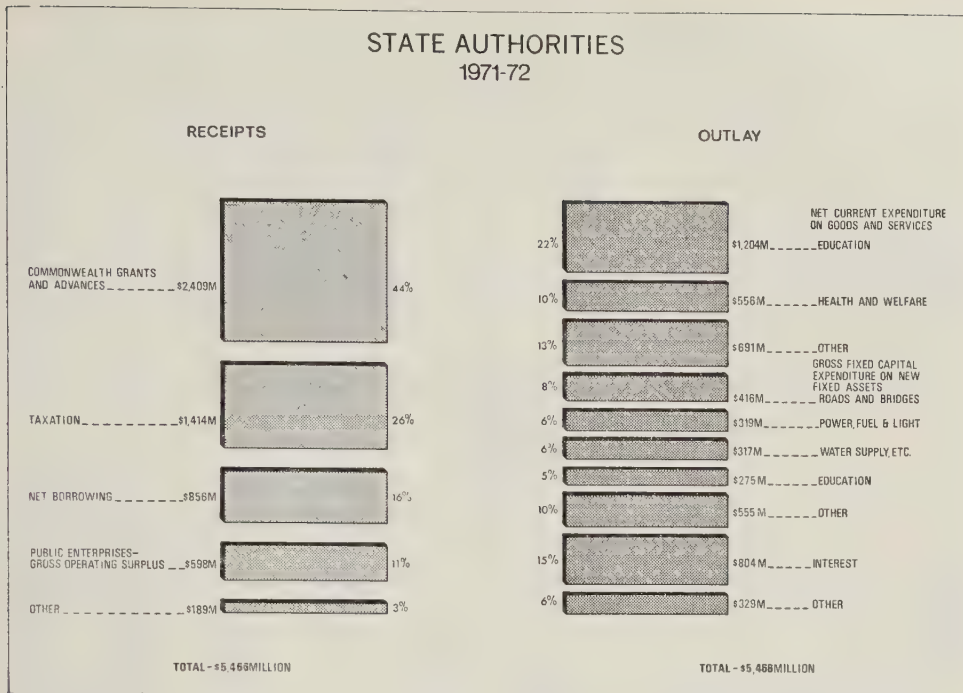


PLATE 35

**Main components of outlay**

The main component of the outlay of State authorities is expenditure on goods and services. As in the case of Commonwealth authorities, this expenditure (as shown here) consists of purchases of goods and services for current consumption, less any charges made by the authorities, together with expenditure on acquisition of fixed assets and changes in stocks, and may be regarded as a measure of demand for goods and services. The following tables show functional dissections of net current expenditure on goods and services and expenditure on new fixed assets as an indication of the range of programs in which the State authorities are involved.

**STATE AUTHORITIES: NET CURRENT EXPENDITURE ON GOODS AND SERVICES  
CLASSIFIED BY FUNCTION, 1967-68 TO 1971-72**  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72p
Law, order and public safety . . . . .	161.5	179.2	202.2	234.8	273.8
Education . . . . .	625.2	707.1	838.0	1,012.0	1,204.4
Cultural and recreational facilities . . . . .	17.0	19.2	20.6	25.6	n.a.
Health . . . . .	265.9	301.1	347.6	427.0	488.5
Welfare . . . . .	37.7	40.0	44.4	53.0	67.4
Development of resources and assistance to industry . . . . .	91.9	100.0	110.9	130.0	152.2
Transport and communication . . . . .	0.7	1.5	0.2	1.2	n.a.
Legislature . . . . .	11.1	11.8	13.6	15.5	
General administration . . . . .	56.6	63.8	69.9	84.8	
Regulation of trade and industry . . . . .	12.5	13.9	15.6	18.1	
Other . . . . .	4.4	4.3	5.7	7.0	
Not allocated to function . . . . .	38.1	41.8	48.7	61.5	
<b>Total . . . . .</b>	<b>1,322.7</b>	<b>1,483.7</b>	<b>1,717.5</b>	<b>2,070.5</b>	<b>2,451.3</b>



**STATE AUTHORITIES: NET CURRENT EXPENDITURE ON GOODS AND SERVICES  
CLASSIFIED BY FUNCTION, BY STATE, 1970-71**

(\$ million)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Law, order and public safety . . . . .	93.2	53.3	38.5	18.2	22.8	8.3	234.8
Education . . . . .	367.6	303.8	118.9	99.1	85.6	37.1	1,012.0
Cultural and recreational facilities . . . . .	10.4	5.6	2.0	3.3	2.4	2.0	25.6
Health . . . . .	159.7	106.5	64.3	35.0	45.9	15.5	427.0
Welfare . . . . .	13.3	15.5	8.4	5.5	7.3	3.1	53.0
Development of resources and assistance to industry . . . . .	45.9	23.6	24.8	6.7	20.5	8.3	130.0
Transport and communication . . . . .	-0.2	0.2	-0.2	0.1	0.8	0.5	1.2
Legislature . . . . .	4.5	3.6	1.9	2.2	2.1	1.2	15.5
General administration . . . . .	38.1	9.3	11.4	9.6	8.6	7.8	84.8
Regulation of trade and industry . . . . .	5.7	5.4	3.8	1.5	1.0	0.6	18.1
Other . . . . .	1.7	-0.6	4.8	0.4	-0.1	0.7	7.0
Not allocated to function . . . . .	33.2	11.9	6.1	0.8	8.2	1.2	61.5
<b>Total . . . . .</b>	<b>773.1</b>	<b>538.5</b>	<b>284.8</b>	<b>182.3</b>	<b>205.2</b>	<b>86.6</b>	<b>2,070.5</b>

**STATE AUTHORITIES: EXPENDITURE ON NEW FIXED ASSETS  
CLASSIFIED BY FUNCTION, 1967-68 TO 1971-72**

(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72p
Law, order and public safety . . . . .	15.7	21.8	21.9	24.2	26.3
Education . . . . .	165.1	190.9	208.5	235.9	274.9
Cultural and recreational facilities . . . . .	8.4	7.6	11.3	16.2	23.9
Health . . . . .	64.8	74.2	81.1	85.4	97.3
Welfare . . . . .	4.5	4.7	4.8	5.0	7.4
Water supply, sewerage, irrigation . . . . .	196.5	211.1	250.2	276.1	317.3
Other development of resources and assistance to industry . . . . .	57.7	60.3	59.0	50.0	51.5
Manufacturing . . . . .	4.0	2.7	3.6	7.8	8.0
Railways . . . . .	107.8	114.2	120.2	122.4	141.6
Harbours . . . . .	47.4	60.0	50.7	52.9	66.4
Roads and bridges . . . . .	278.2	306.1	341.3	367.6	415.8
Other transport and communication . . . . .	16.7	40.6	13.3	13.7	13.4
Power, fuel and light . . . . .	311.2	327.0	341.5	321.3	318.6
Housing . . . . .	61.2	57.3	69.6	81.1	75.4
Public financial enterprises . . . . .	10.2	13.0	24.6	35.8	33.0
Other . . . . .	30.2	27.5	27.3	37.4	43.4
<b>Total . . . . .</b>	<b>1,379.6</b>	<b>1,518.7</b>	<b>1,628.9</b>	<b>1,732.9</b>	<b>1,914.3</b>
<i>of which</i>					
General government . . . . .	618.8	684.2	750.6	824.8	944.3
Public enterprises . . . . .	760.8	834.5	878.2	908.1	970.1

**STATE AUTHORITIES: EXPENDITURE ON NEW FIXED ASSETS, CLASSIFIED BY  
FUNCTION, BY STATE, 1970-71**

(\$ million)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Law, order and public safety . . . . .	10.6	3.9	4.4	1.7	1.8	1.8	24.2
Education . . . . .	80.9	72.6	28.5	26.6	19.4	7.9	235.9
Cultural and recreational facilities . . . . .	12.3	1.5	0.1	..	0.8	1.5	16.2
Health . . . . .	27.7	19.1	6.8	13.2	13.3	5.4	85.4
Welfare . . . . .	2.5	1.3	0.7	0.3	..	0.1	5.0
Water supply, sewerage, irrigation . . . . .	116.3	85.9	15.1	27.4	30.3	1.1	276.1
Other development of resources and assistance to industry . . . . .	14.2	12.1	13.2	1.5	5.4	3.5	50.0
Manufacturing . . . . .	3.0	0.2	..	1.1	3.4	..	7.8
Railways . . . . .	35.7	17.4	40.1	9.7	18.3	1.1	122.4
Harbours . . . . .	14.2	11.6	11.0	5.0	5.5	5.5	52.9
Roads and bridges . . . . .	99.6	108.9	69.5	34.3	42.2	13.1	367.6
Other transport and communication . . . . .	4.2	3.0	..	4.8	1.5	0.2	13.7
Power, fuel and light . . . . .	82.2	117.3	40.8	20.5	27.3	33.0	321.3
Housing . . . . .	22.0	17.7	10.9	5.0	24.5	1.0	81.1
Public financial enterprises . . . . .	11.4	2.5	19.7	0.5	1.7	..	35.8
Other . . . . .	7.7	8.8	4.9	9.7	4.7	1.9	37.4
<b>Total . . . . .</b>	<b>544.7</b>	<b>483.9</b>	<b>265.8</b>	<b>161.4</b>	<b>199.9</b>	<b>77.2</b>	<b>1,732.9</b>

**Main components of receipts**

The major source of funds available to State authorities is in the form of financial assistance by way of grants and advances from the Commonwealth. Taxation is also an important source of revenue, and central government borrowing by way of Commonwealth securities issued on behalf of the States as well as borrowing by statutory bodies accounted for a significant proportion of the total funds available, in marked contrast to the relatively minor role played by borrowing in financing the activities of Commonwealth authorities.

Details of Commonwealth financial assistance to the States have already been given in the section dealing with Commonwealth authorities, and government borrowing activities are dealt with later in this chapter.

The following tables provide details of the taxes collected by State authorities classified by type of tax. Further information relating to State taxes may be found in *Public Authority Finance: Taxation*, 1971-72.

**STATE AUTHORITIES: TAXATION, BY TYPE OF TAX, 1967-68 TO 1971-72**  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Estate, gift, probate and succession duties . . .	119.2	134.4	137.3	149.4	144.6
Property taxes—					
Land tax . . . . .	76.1	75.1	77.0	91.5	102.8
Metropolitan improvement rates . . . . .	6.6	7.3	8.4	8.9	9.4
Other . . . . .	2.2	2.3	2.6	1.7	1.5
<i>Total property</i> . . . . .	<i>84.9</i>	<i>84.8</i>	<i>88.0</i>	<i>102.2</i>	<i>113.7</i>
Liquor taxes . . . . .	34.4	38.4	41.0	44.5	47.9
Taxes on gambling—					
Lotteries . . . . .	29.8	30.7	32.4	33.3	35.4
Poker machines . . . . .	23.1	26.3	30.4	34.8	38.3
Racing . . . . .	44.4	50.1	57.0	63.0	75.6
<i>Total gambling</i> . . . . .	<i>97.3</i>	<i>107.0</i>	<i>119.9</i>	<i>131.1</i>	<i>149.3</i>
Taxes on ownership and operation of motor vehicles—					
Vehicle registration fees and taxes . . . . .	124.4	136.8	150.6	159.6	189.9
Drivers', etc., licences and fees . . . . .	14.9	16.1	16.7	19.4	25.1
Stamp duty on vehicle registration . . . . .	14.8	16.7	19.2	20.3	24.3
Road transport taxes . . . . .	13.7	14.5	15.8	16.4	17.1
Road maintenance contributions . . . . .	28.9	32.7	35.6	37.4	38.8
Motor car third party insurance surcharge and duties . . . . .	3.5	4.1	4.8	5.1	5.9
<i>Total motor vehicles</i> . . . . .	<i>200.1</i>	<i>220.8</i>	<i>242.8</i>	<i>258.2</i>	<i>301.1</i>
Payroll tax . . . . .	..	..	..	..	306.0
Fire brigades contributions from insurance companies, etc. . . . .	19.3	22.2	25.2	28.1	34.9
Stamp duties, n.e.i. . . . .	157.9	206.6	256.9	239.9	249.3
Licences and registration fees, n.e.i. . . . .	5.0	5.6	6.1	6.8	8.2
Other taxes, fees, fines, etc. . . . .	35.2	40.1	42.9	47.6	59.3
<i>Total taxation</i> . . . . .	<i>753.3</i>	<i>859.9</i>	<i>960.2</i>	<i>1,007.9</i>	<i>1,414.4</i>

**STATE AUTHORITIES: PROPORTION OF EACH TYPE OF TAX TO TOTAL TAXATION**  
**1967-68 TO 1971-72**  
(per cent)

	1967-68	1968-69	1969-70	1970-71	1971-72
Estate, gift, probate and succession duties . . . . .	15.8	15.6	14.3	14.8	10.2
Property taxes . . . . .	11.3	9.9	9.2	10.1	8.0
Liquor taxes . . . . .	4.6	4.5	4.3	4.4	3.4
Taxes on gambling . . . . .	12.9	12.4	12.5	13.0	10.6
Taxes on ownership and operation of motor vehicles . . . . .	26.6	25.7	25.3	25.6	21.3
Payroll tax . . . . .	..	..	..	..	21.6
Fire brigades contribution from insurance companies, etc. . . . .	2.6	2.6	2.6	2.8	2.5
Stamp duties n.e.i. . . . .	21.0	24.0	26.8	23.8	17.6
Licences and registration fees n.e.i. . . . .	0.7	0.7	0.6	0.7	0.6
Other taxes, fees, fines, etc. . . . .	4.7	4.7	4.5	4.7	4.2
<b>Total taxation . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**STATE AUTHORITIES: TAXATION BY TYPE OF TAX, BY STATE, 1970-71**  
(\$ million)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Estate, gift, probate and succession duties	60.9	49.9	17.5	9.8	8.3	3.1	149.4
Property taxes—							
Land tax . . . . .	40.4	28.4	5.1	7.6	7.2	2.9	91.5
Metropolitan improvement rates . . . . .	..	7.7	..	..	1.3	..	8.9
Other . . . . .	0.4	..	1.1	0.1	0.2	..	1.7
<b>Total property . . . . .</b>	<b>40.8</b>	<b>36.1</b>	<b>6.2</b>	<b>7.6</b>	<b>8.6</b>	<b>2.9</b>	<b>102.2</b>
Liquor taxes . . . . .	18.2	11.8	6.2	3.3	3.8	1.3	44.5
Taxes on gambling—							
Lotteries . . . . .	18.8	6.4	4.5	1.9	1.7	..	33.3
Poker machines . . . . .	34.8	..	..	..	..	..	34.8
Racing . . . . .	23.9	21.2	8.3	3.4	4.8	1.5	63.0
<b>Total gambling . . . . .</b>	<b>77.5</b>	<b>27.7</b>	<b>12.7</b>	<b>5.3</b>	<b>6.5</b>	<b>1.5</b>	<b>131.1</b>
Taxes on ownership and operation of motor vehicles—							
Vehicle registration fees and taxes . . . . .	49.4	51.9	24.9	14.2	13.8	5.5	159.6
Drivers' etc., licences and fees . . . . .	9.0	5.1	1.6	1.5	1.6	0.7	19.4
Stamp duty on vehicle registration . . . . .	5.0	7.0	3.4	2.5	2.1	0.4	20.3
Road transport taxes . . . . .	5.9	1.9	6.7	..	1.4	0.4	16.4
Road maintenance contributions . . . . .	16.8	8.9	4.7	3.0	4.0	..	37.4
Motor car third party insurance surcharge and duties . . . . .	..	2.9	..	1.0	0.9	0.3	5.1
<b>Total motor vehicles . . . . .</b>	<b>86.1</b>	<b>77.7</b>	<b>41.3</b>	<b>22.0</b>	<b>23.8</b>	<b>7.4</b>	<b>258.2</b>
Fire brigades contribution from insurance companies, etc. . . . .	9.8	8.8	5.5	1.1	2.2	0.7	28.1
Stamp duties n.e.i. . . . .	98.3	73.5	23.9	18.3	20.8	5.1	239.9
Licences and registration fees n.e.i. . . . .	2.2	2.2	0.7	0.9	0.7	0.1	6.8
Other taxes, fees, fines, etc. . . . .	16.9	16.7	8.7	2.8	2.1	0.4	47.6
<b>Total taxation . . . . .</b>	<b>410.7</b>	<b>304.3</b>	<b>122.7</b>	<b>71.1</b>	<b>76.8</b>	<b>22.4</b>	<b>1,007.9</b>



## LOCAL AUTHORITIES

In each State of the Commonwealth there exists a system of local government whose powers and responsibilities are in general similar, and cover such matters as the construction and maintenance of roads, streets and bridges, water, sewerage and drainage systems, and health and sanitary services, the supervision of building, and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions, there are also many which may be performed by a local authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas, and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, baths, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers. While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc. vary considerably from State to State, and even within States.

The areas over which local government bodies, numbering in excess of 900, exercise general control, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as cities, corporate towns and district council areas; in Western Australia as cities, towns and shires; and in Tasmania as cities and municipalities. In New South Wales some local authorities in an area have combined to provide services such as electricity, water, sewerage and drainage—e.g. the county councils. Within shires there are also some municipal units known as urban areas. Apart from the more thinly populated parts of New South Wales and South Australia, and the Commonwealth Territories (except for the City of Darwin and Alice Springs), practically the whole of Australia comes within local government jurisdiction. For further details *see* State Year Books.

### **Area, population, dwellings, and value of rateable property**

The area, population, dwellings, and the value of rateable property in the incorporated areas of each State are shown in the following table. The valuations relate to rateable property only and exclude government and other non-rateable property, whose value in the aggregate is considerable. In some cases councils rate on annual value, or unimproved capital value, or improved capital value, or partly on each of these bases of valuation. The amounts stated are the totals for the areas rated according to each basis of valuation. Particulars of dwellings are in accordance with the definition used in the 1966 census, and are compiled from information collected on the census schedules. For the purpose of the census a dwelling was defined as any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term has, therefore, a very wide reference and includes, in addition to houses and flats, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. Unoccupied dwellings include vacant dwellings available for sale and renting, 'week-end' and holiday dwellings, and other dwellings temporarily unoccupied on the night of the Census. Dwellings being built are not included.

In the following table particulars of number, area, and value of rateable property refer to estimates made, where practicable, for the capital city statistical division and outside this division. Wherever the statistical boundary cuts across a local government area the estimates have involved either the inclusion or exclusion of the whole of the local government authority concerned in, or from, the capital city statistical division. Particulars of population refer to estimates made for capital city statistical division and outside this division in accordance with the definition of boundaries used in the 1966 census and exclude migratory population and population in unincorporated areas.

**LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS, AND  
VALUE OF RATEABLE PROPERTY, STATES**

Location	Number	Area	Population	Dwellings		Value of rateable property		
				Occupied	Un-occupied	Unimproved capital value	Improved capital value	Annual value
		'000 acres	'000	No.	No.	\$'000	\$'000	\$'000
New South Wales(a)—								
Sydney Statistical Division	40	1,007	(c)2,851	(d)845,725	(e)53,293	6,227,147	13,462,419	986,562
Other(b)	185	173,363	(c)1,803	(d)510,315	(e)71,093	2,638,401	n.a.	n.a.
<i>Total New South Wales</i>	<i>225</i>	<i>174,370</i>	<i>(c)4,654</i>	<i>(d)1,356,040</i>	<i>(e)124,386</i>	<i>8,865,548</i>	<i>n.a.</i>	<i>n.a.</i>
Victoria(e)—								
Melbourne Statistical Division	55	1,933	2,518	787,481		n.a.	11,069,096	610,851
Other(f)	155	54,177	979	310,128		n.a.	5,428,026	278,744
<i>Total Victoria</i>	<i>210</i>	<i>56,110</i>	<i>3,497</i>	<i>1,097,609</i>		<i>n.a.</i>	<i>16,497,122</i>	<i>889,595</i>
Queensland(g)—								
Brisbane Statistical Division	9	2,428	903	278,774		967,828	n.a.	n.a.
Other	122	423,830	915	291,068		892,185	n.a.	n.a.
<i>Total Queensland</i>	<i>131</i>	<i>426,258</i>	<i>1,818</i>	<i>569,842</i>		<i>1,860,013</i>	<i>n.a.</i>	<i>n.a.</i>
South Australia(h)—								
Adelaide Statistical Division	21	573	827	254,960		n.a.	2,587,000	129,338
Other	10	36,679	331	105,910		n.a.	1,319,000	65,953
<i>Total South Australia</i>	<i>138</i>	<i>37,252</i>	<i>1,158</i>	<i>360,870</i>		<i>n.a.</i>	<i>3,906,000</i>	<i>195,291</i>
Western Australia(g)—								
Perth Statistical Division	26	1,327	703	203,007	13,696	821,506	n.a.	45,299
Other	114	623,262	324	83,838	14,578	323,745	n.a.	9,163
<i>Total Western Australia</i>	<i>140</i>	<i>624,589</i>	<i>1,028</i>	<i>286,845</i>	<i>28,274</i>	<i>1,145,251</i>	<i>n.a.</i>	<i>54,462</i>
Tasmania(c)—								
Hobart Statistical Division(i)	7	238	155	43,121	3,614	213,240	742,541	46,457
Other(i)	4	16,647	237	67,299	9,745	241,822	1,037,404	59,280
<i>Total Tasmania</i>	<i>11</i>	<i>16,885</i>	<i>392</i>	<i>110,420</i>	<i>13,359</i>	<i>455,062</i>	<i>1,779,946</i>	<i>105,736</i>

(a) Based on year ended 31 December 1971. (b) Excludes Lord Howe Island, unincorporated areas and migratory population. (c) As at 30 June 1972. (d) Estimated on basis of Census 30 June 1971. (e) Based on year ended 30 September 1971. (f) Excludes Yallourn Works Area, under the jurisdiction of the State Electricity Commission, and other unincorporated areas. (g) Year ended 30 June 1971. Total population less migratory and unincorporated. (h) Year ended 30 June 1970. (i) Includes parts only of four L.G.A.s.

### Receipts and outlay

The following tables show details of the receipts and outlay of all local authorities for the years 1967-68 to 1971-72, and of local authorities in each of the six States in 1970-71. The figures up to 1967-68 are based upon detailed analyses of the accounting reports of local authorities; however, as complete information was not available at the time of their preparation, the figures for 1970-71 have been estimated, and should therefore be regarded as approximate only. Figures shown for 1971-72 are based on very limited data, but may be taken as rough indicators of orders of magnitude.

## LOCAL AUTHORITIES: RECEIPTS AND OUTLAY, 1967-68 TO 1971-72

(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72p
RECEIPTS					
Current receipts—					
Taxes, fees, fines, etc.—					
Rates on land . . . . .	319.4	345.5	372.7	400.5	434.3
Licences, etc. . . . .	11.7	13.0	9.4	10.1	10.6
Total . . . . .	331.1	358.4	382.1	410.6	444.9
Income from public enterprises . . . . .	65.0	71.0	83.1	78.8	86.1
Interest, etc., received . . . . .	3.1	3.3	3.4	4.2	4.5
Grants from State . . . . .	57.5	59.9	57.0	68.7	81.0
Total current receipts . . . . .	456.7	492.6	525.6	562.3	616.5
Capital receipts—					
Depreciation allowances . . . . .	21.9	23.7	26.2	28.1	30.3
Net borrowing—					
Local authority securities . . . . .	95.1	106.3	82.0	80.6	106.0
Advances from State . . . . .	6.6	6.7	9.3	5.3	7.0
Other funds available (including errors and omissions) . . . . .	52.1	55.0	61.1	65.6	72.0
Total capital receipts . . . . .	175.7	191.7	178.6	179.6	215.3
Reduction in cash and bank balances . . . . .	-8.6	-11.8	10.5	23.6	0.1
<b>Total receipts . . . . .</b>	<b>623.8</b>	<b>672.5</b>	<b>714.7</b>	<b>765.5</b>	<b>831.8</b>
OUTLAY					
Current outlay—					
Net current expenditure on goods and services—					
Cultural and recreational facilities . . . . .	41.3	42.2	46.5	52.2	n.a.
Health . . . . .	26.0	29.2	30.2	33.8	36.1
Development of resources and assistance to industry . . . . .	4.2	4.6	4.4	5.0	5.8
General administration . . . . .	49.7	57.2	62.4	67.7	n.a.
Other . . . . .	31.0	27.6	30.1	39.7	n.a.
Total . . . . .	152.2	160.8	173.5	198.4	223.8
Interest, etc., paid . . . . .	65.8	72.9	79.8	84.7	90.2
Total current outlay . . . . .	218.0	233.7	253.3	283.1	314.0
Capital outlay—					
Expenditure on new fixed assets—					
Cultural and recreational facilities . . . . .	13.2	16.8	16.2	18.1	n.a.
Water supply, sewerage . . . . .	55.2	60.2	65.8	65.4	n.a.
Other development of resources and assistance to industry . . . . .	1.7	4.6	4.3	2.2	n.a.
Manufacturing . . . . .	2.3	0.8	1.0	1.1	n.a.
Roads and bridges . . . . .	246.5	255.7	264.1	281.7	308.9
Other transport . . . . .	1.8	1.9	2.9	3.1	2.4
Power, fuel and light . . . . .	62.8	62.2	67.3	75.9	75.6
Other . . . . .	24.3	35.9	38.5	34.1	n.a.
Total . . . . .	407.8	438.2	460.0	481.7	516.9
Expenditure on existing assets and stocks . . . . .	-2.9	-0.3	0.4	-0.2	-0.1
Advances to other sectors . . . . .	0.9	0.9	1.0	0.9	1.0
Total capital outlay . . . . .	405.8	438.8	461.4	482.4	517.8
<b>Total outlay . . . . .</b>	<b>623.8</b>	<b>672.5</b>	<b>714.7</b>	<b>765.5</b>	<b>831.8</b>



**LOCAL AUTHORITIES: RECEIPTS AND OUTLAY, BY STATE, 1970-71**  
(\$ million)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>RECEIPTS</b>							
Current receipts—							
Taxes, fees, fines, etc.—							
Rates on land . . . . .	171.6	112.0	50.3	29.0	25.7	12.0	400.5
Licences, etc. . . . .	4.4	2.6	1.2	0.3	1.6	0.2	10.1
<i>Total . . . . .</i>	<i>176.0</i>	<i>114.6</i>	<i>51.5</i>	<i>29.3</i>	<i>27.2</i>	<i>12.1</i>	<i>410.6</i>
Income from public enterprises . . . . .	36.1	4.1	32.8	0.1	1.6	4.2	78.8
Interest, etc., received . . . . .	0.8	3.2	..	0.2	0.1	..	4.2
Grants from State . . . . .	27.2	2.7	26.8	4.8	7.7	−0.4	68.7
<i>Total current receipts . . . . .</i>	<i>240.1</i>	<i>124.5</i>	<i>111.1</i>	<i>34.3</i>	<i>36.5</i>	<i>15.9</i>	<i>562.3</i>
Capital receipts—							
Depreciation allowances . . . . .	28.1	..	..	..	..	..	28.1
Net borrowing—							
Local authority securities . . . . .	33.9	3.3	23.4	7.3	8.8	3.9	80.6
Advances from State . . . . .	0.3	0.5	3.2	−0.3	..	1.6	5.3
Other funds available (including errors and omissions) . . . . .	27.2	19.2	1.4	3.1	14.0	0.7	65.6
<i>Total capital receipts . . . . .</i>	<i>89.5</i>	<i>23.0</i>	<i>28.0</i>	<i>10.1</i>	<i>22.8</i>	<i>6.2</i>	<i>179.6</i>
Reduction in cash and bank balances . . . . .	5.0	5.1	15.1	1.7	−1.3	−2.0	23.6
<i>Total receipts . . . . .</i>	<i>334.5</i>	<i>152.6</i>	<i>154.2</i>	<i>46.1</i>	<i>58.0</i>	<i>20.1</i>	<i>765.5</i>
<b>OUTLAY</b>							
Current outlay—							
Net current expenditure on goods and services—							
Cultural and recreational facilities . . . . .	21.1	16.4	3.7	3.3	6.3	1.4	52.2
Health . . . . .	13.4	11.7	2.5	3.0	2.2	1.0	33.8
Development of resources and assistance to industry . . . . .	2.2	1.5	1.0	0.1	0.1	..	5.0
General administration . . . . .	20.7	22.9	12.1	4.8	4.8	2.5	67.7
Other . . . . .	14.6	5.0	17.0	1.7	2.8	−1.4	39.7
<i>Total . . . . .</i>	<i>72.0</i>	<i>57.6</i>	<i>36.2</i>	<i>12.9</i>	<i>16.2</i>	<i>3.6</i>	<i>198.4</i>
Interest, etc., paid . . . . .	36.5	12.5	23.5	3.6	4.6	4.1	84.7
<i>Total current outlay . . . . .</i>	<i>108.5</i>	<i>70.0</i>	<i>59.7</i>	<i>16.6</i>	<i>20.7</i>	<i>7.6</i>	<i>283.1</i>
Capital outlay—							
Expenditure on new fixed assets—							
Cultural and recreational facilities . . . . .	2.5	5.2	6.5	..	3.0	0.8	18.1
Water supply, sewerage . . . . .	19.3	0.1	41.3	..	0.1	4.6	65.4
Other development of resources and assistance to industry . . . . .	2.2	..	..	..	..	..	2.2
Manufacturing . . . . .	1.1	..	..	..	..	..	1.1
Roads and bridges . . . . .	125.2	60.8	40.0	23.5	24.7	7.4	281.7
Other transport . . . . .	..	..	3.1	..	..	..	3.1
Power, fuel and light . . . . .	62.8	3.2	9.0	0.1	1.0	..	75.9
Other . . . . .	12.1	10.4	−2.4	5.9	8.5	−0.4	34.1
<i>Total . . . . .</i>	<i>225.2</i>	<i>79.8</i>	<i>97.5</i>	<i>29.5</i>	<i>37.3</i>	<i>12.5</i>	<i>481.7</i>
Expenditure on existing assets and stocks . . . . .	..	2.8	−3.0	..	..	..	−0.2
Advances to other sectors . . . . .	0.9	..	..	..	..	..	0.9
<i>Total capital outlay . . . . .</i>	<i>226.1</i>	<i>82.6</i>	<i>94.5</i>	<i>29.5</i>	<i>37.3</i>	<i>12.5</i>	<i>482.4</i>
<i>Total outlay . . . . .</i>	<i>334.5</i>	<i>152.6</i>	<i>154.2</i>	<i>46.1</i>	<i>58.0</i>	<i>20.1</i>	<i>765.5</i>

## ALL PUBLIC AUTHORITIES

In the following tables the transactions of the Commonwealth, State and Local authorities have been brought together and consolidated to provide details of the receipts and outlay of the public authority sector as a whole.

## Summary of receipts and outlay

The receipts and outlay of all public authorities for the five year period ended 1971-72 are set out in the following table.

## ALL PUBLIC AUTHORITIES(a): RECEIPTS AND OUTLAY, 1967-68 TO 1971-72

(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
RECEIPTS					
Current receipts—					
Taxes, fees, fines, etc. . . . .	6,035	6,745	7,720	8,600	9,796
Income from public enterprises . . . . .	542	615	682	676	741
Interest, etc., received . . . . .	181	197	230	277	275
<i>Total current receipts . . . . .</i>	<i>6,758</i>	<i>7,557</i>	<i>8,632</i>	<i>9,553</i>	<i>10,812</i>
Capital receipts—					
Depreciation allowances . . . . .	323	368	415	429	471
Net sale of securities—					
Government securities—					
Australia . . . . .	538	163	280	260	758
Overseas . . . . .	133	142	-131	-46	-97
Local authority and public corporation securities . . . . .	314	368	337	384	423
Other funds available (including errors and omissions) . . . . .	125	115	199	122	72
<i>Total capital receipts . . . . .</i>	<i>1,434</i>	<i>1,157</i>	<i>1,100</i>	<i>1,149</i>	<i>1,627</i>
Reduction in cash and bank balances . . . . .	-87	-81	-56	-143	-618
<b>Total receipts . . . . .</b>	<b>8,104</b>	<b>8,633</b>	<b>9,676</b>	<b>10,560</b>	<b>11,822</b>
OUTLAY					
Current outlay—					
Net current expenditure on goods and services . . . . .	3,082	3,364	3,677	4,258	4,831
Interest, etc., paid . . . . .	655	703	767	818	880
Cash benefits to persons . . . . .	1,323	1,442	1,638	1,818	2,113
Subsidies . . . . .	193	223	262	278	372
Transfers overseas . . . . .	154	160	180	185	205
Grants for private capital purposes . . . . .	76	46	52	52	58
<i>Total current outlay . . . . .</i>	<i>5,482</i>	<i>5,938</i>	<i>6,576</i>	<i>7,410</i>	<i>8,459</i>
Capital outlay—					
Expenditure on new fixed assets . . . . .	2,346	2,508	2,715	2,882	3,230
Expenditure on existing assets . . . . .	11	4	13	23	28
Increase in stocks . . . . .	-14	2	5	63	-22
Advances to other sectors . . . . .	279	180	367	181	127
<i>Total capital outlay . . . . .</i>	<i>2,622</i>	<i>2,695</i>	<i>3,100</i>	<i>3,150</i>	<i>3,363</i>
<b>Total outlay . . . . .</b>	<b>8,104</b>	<b>8,633</b>	<b>9,676</b>	<b>10,560</b>	<b>11,822</b>

(a) Excluding financial enterprises.

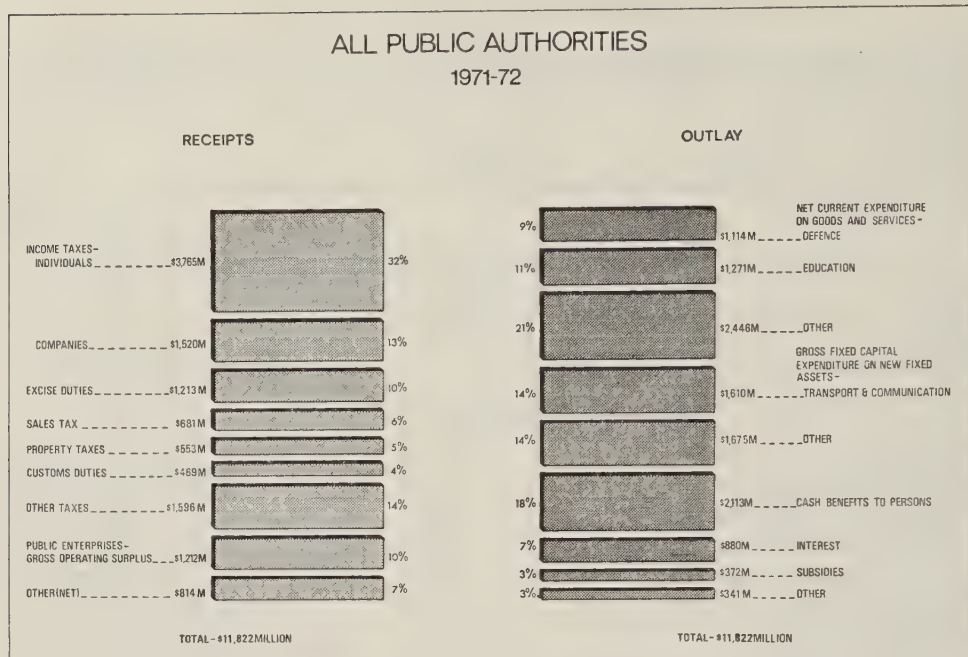


PLATE 36

**Main components of outlay**

The following tables provide functional dissections for the years 1967-68 to 1971-72 of the net current expenditure on goods and services and expenditure on new fixed assets of all public authorities as an indication of the purposes being served by the various programs of government.

**ALL PUBLIC AUTHORITIES: NET CURRENT EXPENDITURE ON GOODS AND SERVICES**  
**CLASSIFIED BY FUNCTION, 1967-68 TO 1971-72**  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Law, order and public safety . . . . .	174	193	219	255	299
Education . . . . .	656	744	880	1,071	1,271
Cultural and recreational facilities . . . . .	114	124	141	156	175
Health . . . . .	318	360	413	505	577
Welfare . . . . .	60	65	76	89	111
Defence . . . . .	984	1,018	990	1,074	1,114
Repatriation . . . . .	71	76	83	92	108
Development of resources and assistance to industry . . . . .	229	252	277	318	356
Transport and communication . . . . .	34	36	40	47	56
Legislature . . . . .	23	24	28	32	39
General administration . . . . .	236	264	298	352	427
Foreign affairs . . . . .	23	26	31	35	41
Immigration . . . . .	39	54	60	61	52
Regulation of trade and industry . . . . .	24	27	30	35	43
Housing . . . . .	6	6	6	7	8
Other . . . . .	28	26	28	38	41
Not allocated to function . . . . .	62	70	77	91	113
<b>Total . . . . .</b>	<b>3,082</b>	<b>3,364</b>	<b>3,677</b>	<b>4,258</b>	<b>4,831</b>



**ALL PUBLIC AUTHORITIES: EXPENDITURE ON NEW FIXED ASSETS, CLASSIFIED  
BY FUNCTION, 1967-68 TO 1971-72**

(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Law, order and public safety . . . . .	17	23	23	26	29
Education . . . . .	179	204	226	256	300
Cultural and recreational facilities . . . . .	34	35	37	46	58
Health . . . . .	69	77	86	99	118
Welfare . . . . .	6	7	7	9	10
Repatriation . . . . .	3	3	3	5	3
Development of resources and assistance to industry . . . . .	335	357	404	424	475
Manufacturing . . . . .	7	4	6	10	11
Transport and communication . . . . .	1,119	1,192	1,282	1,368	1,610
Power, fuel and light . . . . .	418	425	451	436	420
Housing . . . . .	75	77	88	98	83
Other . . . . .	99	119	126	140	151
Not allocated to function . . . . .	11	11	16	15	18
<b>Total . . . . .</b>	<b>2,372</b>	<b>2,536</b>	<b>2,755</b>	<b>2,932</b>	<b>3,285</b>

**Main components of receipts**

Taxes and net borrowing constitute the main sources of financing of the activities of the public authorities. Details of the debt of public authorities are given in the next section of this chapter. Taxation, by type of tax, for the years 1967-68 to 1971-72 was as follows.

**ALL PUBLIC AUTHORITIES: TAXATION, BY TYPE OF TAX, 1967-68 TO 1971-72**

(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
Income tax—					
Individuals . . . . .	2,175	2,377	2,855	3,175	3,765
Companies(a) . . . . .	853	1,031	1,187	1,428	1,520
Estate, gift, probate and succession duties . . . . .	182	204	217	227	220
Customs duties . . . . .	312	346	414	466	469
Excise duties . . . . .	855	902	939	1,053	1,213
Sales tax . . . . .	417	494	569	633	681
Primary production taxes . . . . .	32	34	33	27	29
Payroll tax . . . . .	184	206	230	248	397
Property taxes . . . . .	405	431	462	505	553
Liquor taxes . . . . .	35	39	41	45	49
Taxes on gambling . . . . .	97	107	120	131	149
Taxes on ownership and operation of motor vehicles . . . . .	206	227	245	260	303
Stamp duties, n.e.i. . . . .	158	207	259	243	252
Licences and registration fees, n.e.i. . . . .	51	59	63	66	81
Other taxes, fees, fines, etc. . . . .	72	80	86	93	115
<b>Total . . . . .</b>	<b>6,035</b>	<b>6,745</b>	<b>7,720</b>	<b>8,600</b>	<b>9,796</b>

(a) Taxes paid by Commonwealth public enterprises have been offset. Includes dividend and interest (withholding) taxes.

**Level of government**

In the following tables details are given for 1970-71 of the receipts and outlay of all public authorities, broken down by level of government in order to show their relative contributions to various expenditure programs, and their roles in financing these programs through taxes and transfers.

**ALL PUBLIC AUTHORITIES(a): RECEIPTS AND OUTLAY, BY LEVEL OF  
GOVERNMENT, 1970-71**

**I. RECEIPTS**

(\$ million)

	<i>Common- wealth authorities</i>	<i>State authorities</i>	<i>Local authorities</i>	<i>All public authorities</i>
<b>Current Receipts—</b>				
Taxes, fees, fines, etc.—				
Income tax—				
Individuals . . . . .	3,175	..	..	3,175
Companies(b) . . . . .	1,428	..	..	1,428
Estate, gift, probate and succession duties . . . . .	78	149	..	227
Customs duties . . . . .	466	..	..	466
Escise duties . . . . .	1,053	..	..	1,053
Sales tax . . . . .	633	..	..	633
Payroll tax . . . . .	248	..	..	248
Primary production taxes and charges . . . . .	27	..	..	27
Property taxes . . . . .	2	102	401	505
Liquor taxes . . . . .	1	45	..	45
Taxes on gambling . . . . .	..	131	..	131
Taxes on ownership and operation of motor vehicles . . . . .	2	258	..	260
Stamp duties, n.e.i. . . . .	3	240	..	243
Broadcasting listeners' and television viewers' licences . . . . .	50	..	..	50
Licences and registration fees, n.e.i. . . . .	3	7	7	17
Other taxes, fees, fines, etc. . . . .	14	76	3	93
<i>Total taxes, etc.</i> . . . . .	<i>7,181</i>	<i>1,008</i>	<i>411</i>	<i>8,600</i>
Income from public enterprises . . . . .	235	363	79	676
Interest, etc., received . . . . .	65	208	4	277
Grants—				
from Commonwealth . . . . .	-1,652	1,652	..	..
from State . . . . .	..	-69	69	..
<i>Total current receipts available for own         functions</i> . . . . .	<i>5,829</i>	<i>3,162</i>	<i>562</i>	<i>9,553</i>
<b>Capital receipts—</b>				
Depreciation allowances . . . . .	193	208	28	429
Net sale of securities—				
Government securities—				
Australia . . . . .	-167	427	..	260
Overseas . . . . .	6	-52	..	-46
Local authority and public corporation securities . . . . .	-10	313	81	384
Net advances—				
from Commonwealth . . . . .	-151	151	..	..
from States . . . . .	..	-5	5	..
Grants from Commonwealth . . . . .	-554	554	..	..
Other funds available (including errors and omissions) . . . . .	13	43	66	122
<i>Total capital receipts available for own         functions</i> . . . . .	<i>-669</i>	<i>1,639</i>	<i>180</i>	<i>1,149</i>
Reduction in cash and bank balances . . . . .	-101	-66	24	-143
<b>Total funds available for own factories . . . . .</b>	<b>5,059</b>	<b>4,735</b>	<b>766</b>	<b>10,560</b>

(a) Excluding financial enterprises,  
dividend and interest (withholding) taxes.

(b) Taxes paid by Commonwealth public enterprises have been offset. Includes

ALL PUBLIC AUTHORITIES(a): RECEIPTS AND OUTLAY, BY LEVEL OF GOVERNMENT  
1970-71—continuedII. OUTLAY  
(\$ million)

	Common- wealth authorities	State authorities	Local authorities	All public authorities
Expenditure on goods and services—				
Law, order and public safety . . . . .	22	259	..	281
Education . . . . .	79	1,248	..	1,327
Cultural and recreational facilities . . . . .	90	42	70	202
Health . . . . .	57	512	35	604
Welfare . . . . .	40	58	1	98
Defence . . . . .	1,073	1	..	1,074
Repatriation . . . . .	98	..	..	98
Development of resources and assistance to industry . . . . .	214	456	73	742
Manufacturing . . . . .	1	8	1	10
Transport and communication . . . . .	572	558	285	1,414
Power, fuel and light . . . . .	39	323	76	438
Housing . . . . .	23	82	..	105
Other . . . . .	386	221	140	746
<i>Total</i> . . . . .	2,693	3,768	680	7,140
<i>of which—</i>				
Net current expenditure on goods and services . . . . .	1,990	2,071	198	4,258
Expenditure on new fixed assets . . . . .	703	1,697	482	2,882
Expenditure on existing assets and stocks . . . . .	41	46	..	86
Current transfers—				
Interest . . . . .	12	721	85	818
Cash benefits to persons . . . . .	1,772	47	..	1,818
Subsidies . . . . .	262	16	..	278
Transfers overseas . . . . .	185	..	..	185
Grants for private capital purposes . . . . .	37	15	..	52
<i>Total</i> . . . . .	2,268	799	85	3,152
Capital transfers—				
Net advances to other sectors . . . . .	58	122	1	181
<i>Total outlay</i> . . . . .	5,059	4,735	766	10,560

(a) Excluding financial enterprises.

## PUBLIC SECTOR BORROWING

Figures given in this section do not purport to show either 'public debt' or 'net public debt', but are designed to provide details of securities issued on behalf of the Commonwealth and the States, together with details of securities issued and other forms of debt outstanding in respect of local authorities and State authorities with independent borrowing powers.

This information cannot be aggregated, without adjustment, to provide a measure of the 'debt' of public authorities for a number of reasons. There are forms of debt not evidenced by the issue of securities, such as Commonwealth advances to the States for specific capital purposes—of which the advances made under the Commonwealth-State Housing Agreements would be the most important example. Governments themselves maintain significant holdings of their own securities: for example, the Commonwealth Government, in the National Debt Sinking Fund, the Loan Consolidation and Investment Reserve, and in other Trust Funds, holds large investments in securities issued either directly by itself or on behalf of the States. Some of the securities issued on behalf of the States and held by the Commonwealth represent the proceeds of overseas loans, securities for which were issued



directly by the Commonwealth—the Australian currency counterpart proceeds of the loans being invested in special loans to finance State works programs. A number of State public corporations and local authorities also maintain significant investments in government securities (including their own securities). Aggregation of the figures for securities on issue which follow would clearly involve a substantial degree of duplication; the sum of securities on issue therefore cannot be regarded as representing 'net public debt'.

### Commonwealth and States: Loan transactions and Government securities on issue

Under the 1927 Financial Agreement between the Commonwealth and the States, the Commonwealth Government accepted responsibility for the securities of State governments then on issue, and was empowered to arrange for all future borrowings on behalf of the Commonwealth and the States and to issue Commonwealth securities for all money borrowed. The Commonwealth is reimbursed by the States for interest, exchange, etc., paid on their behalf, and the securities are redeemed from the National Debt Sinking Fund to which both the Commonwealth and State Governments make contributions.

In the tables which follow, details are given of transactions in Commonwealth securities issued on account of the Commonwealth and the States, together with details of securities on issue, annual interest liability and average rate of interest liability. Amounts relating to overseas loans are shown in the currencies in which the loans are repayable, and in Australian currency equivalent calculated on the basis of the International Monetary Fund par rates of exchange (and the calculated equivalent for Swiss francs) ruling at 30 June in each year shown. All amounts shown are at face value.

For further information relating to securities issued by the governments of the Commonwealth and the States reference should be made to the Commonwealth Budget paper *Government Securities on Issue*.

#### Net movement in securities on issue

Summary details of the net movement in securities issued for Commonwealth purposes and on account of the States during the period 1967–68 to 1971–72, are given in the following group of tables. Also provided is a table (page 604) which sets out the balance of securities on issue at 30 June 1971 and 1972, and the composition of the change in these balances.

#### NET MOVEMENT IN GOVERNMENT SECURITIES ON ISSUE, 1967-68 TO 1971-72 (\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
NEW SECURITIES ISSUED					
Securities repayable in Australian currency—					
Inscribed stock and bonds . . . . .	717.4	633.7	902.1	808.3	814.8
Special bonds . . . . .	78.7	73.4	134.0	233.1	139.2
Drought bonds . . . . .	..	..	1.7	0.4	0.2
Advance loan subscriptions . . . . .	0.9	7.6	..	8.2	0.4
Overdue securities . . . . .	..	..	..	..	..
Tax-free stock . . . . .	..	..	..	..	..
Debentures . . . . .	..	..	..	..	..
Stock issued to Government Savings banks under special agreements(a) . . . . .	18.0	13.4	16.1	15.0	24.5
Treasury notes . . . . .	185.3	..	46.5	17.9	(c)—9.7
Treasury bills—					
Internal . . . . .	5.5	174.2	172.1	8.2	(c)—5.3
Public . . . . .	140.0	..	..	..	..
<b>Total . . . . .</b>	<b>1,145.7</b>	<b>902.3</b>	<b>1,272.5</b>	<b>1,091.1</b>	<b>964.0</b>
Securities repayable in overseas currencies(b) . . . . .	271.7	273.6	111.0	125.0	161.0
<b>Total new securities issued . . . . .</b>	<b>1,417.4</b>	<b>1,175.9</b>	<b>1,383.6</b>	<b>1,216.1</b>	<b>1,125.0</b>

For footnotes see next page.

NET MOVEMENT IN GOVERNMENT SECURITIES ON ISSUE, 1967-68 TO 1971-72—*continued*  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
REDEMPTIONS, REPURCHASES, CANCELLATIONS(d)					
Securities repayable in Australian currency—					
Inscribed stock and bonds . . . . .	333.7	191.8	341.9	612.4	225.4
Special bonds . . . . .	37.2	46.3	80.6	148.8	83.8
Drought bonds . . . . .	..	..	0.7	0.7	0.3
Advance loan subscriptions . . . . .	..	..	21.1	..	..
Overdue securities . . . . .	-1.5	6.3	-2.4	1.2	1.4
Tax-free stock . . . . .	0.1	..	0.5	..	0.1
Debentures . . . . .	2.4	2.5	2.6	2.7	2.8
Stock issued to Government Savings banks under special agreements(a) . . . . .	3.5	3.4	3.7	4.0	4.1
Treasury notes . . . . .	..	68.3	..	..	..
Treasury bills—					
Internal . . . . .	..	..	..	..	..
Public . . . . .	89.0	127.0	14.0	..	..
<i>Total</i> . . . . .	464.3	445.8	462.8	769.8	317.8
Securities repayable in overseas currencies(b) . . . . .	245.7	134.3	228.5	159.3	264.4
<b>Total redemptions, etc.</b> . . . . .	<b>710.0</b>	<b>580.1</b>	<b>691.2</b>	<b>929.1</b>	<b>582.2</b>

NET MOVEMENT

Securities repayable in Australian currency—					
Inscribed stock and bonds . . . . .	383.7	441.9	560.1	195.9	589.4
Special bonds . . . . .	41.5	27.1	53.4	84.4	55.4
Drought bonds . . . . .	..	..	0.9	-0.3	-0.1
Advance loan subscriptions . . . . .	0.9	7.6	-21.2	8.2	0.4
Overdue securities . . . . .	1.5	-6.5	2.4	-1.2	-1.4
Tax-free stock . . . . .	-0.1	..	-0.5	..	-0.1
Debentures . . . . .	-2.4	-2.5	-2.6	-2.7	-2.8
Stock issued to Government Savings banks under special agreements(a) . . . . .	14.5	10.0	12.4	11.0	20.4
Treasury notes . . . . .	185.3	-68.3	46.5	17.9	-9.7
Treasury bills—					
Internal— . . . . .	5.5	174.2	172.1	8.2	-5.3
Public . . . . .	51.0	-127.0	-14.0	..	..
<i>Total</i> . . . . .	681.4	456.5	809.7	321.3	646.2
Securities repayable in overseas currencies(b) . . . . .	26.0	139.3	-117.4	-34.3	-103.4
<b>Net movement in securities on issue</b> . . . . .	<b>707.4</b>	<b>595.8</b>	<b>692.3</b>	<b>287.0</b>	<b>542.7</b>

(a) Recorded in Commonwealth Loan Fund as State domestic raisings. (b) Australian currency equivalent at rates of exchange ruling at 30 June in each of the years shown. (c) Net issue. (d) Includes conversions from one type of security to another, which affect the net movements of individual loan categories, but do not affect the overall net movement.

The net movement in securities on issue may be reconciled with the Budget deficit, as shown in the following table. For details relating to the financing of the budget deficit see page 547.

## RECONCILIATION OF DEFICIT WITH NET MOVEMENT IN SECURITIES ON ISSUE

(\$ million)

(Source: Supplement to the *Treasury Information Bulletin*, August 1972)

	1967-68	1968-69	1969-70	1970-71	1971-72
Net movement in securities on issue . . . . .	707	596	692	287	543
Less net increase in securities on issue held by Trust Fund(a) . . . . .	-146	-268	-512	-88	58
	561	328	180	199	601
Adjustment from face value to cash basis . . . . .	(b)103	..	(c)-18	(c)-21	(c)64
	664	328	163	179	665
Less increases in net assets of Commonwealth—					
Cash balances . . . . .	..	..	-19	-157	-567
International Monetary Fund . . . . .	-59	-5	..	-37	..
Other(a) . . . . .	37	62	(d)-137	(d)91	(d)89
Deficit . . . . .	642	385	7	75	187

(a) Excludes investment of other than Commonwealth balances in the Trust Fund. (b) Includes adjustment of Australian currency equivalent of Sterling debt, following devaluation of Sterling. See page 19 of the white paper, *Government Securities on Issue at 30 June 1968*. (c) Includes adjustment of Australian currency equivalent of overseas debt, following variations in the rates of exchange. See page 20 of *Government Securities on Issue at 30 June 1970, 1971 and 1972*. (d) Includes net advances to Australian Wheat Board, \$184 million in 1969-70, -\$65 million in 1970-71 and -\$53 million in 1971-72.

## NET MOVEMENT IN GOVERNMENT SECURITIES ON ISSUE, 1971-72

(\$ million)

	Change during 1971-72				
	Securities on issue at 30 June 1970	New securities issued	Redemptions, repurchases, cancellations (a)	Securities on issue at 30 June 1972	Net movement
Securities repayable in Australian currency—					
Commonwealth—					
Inscribed stock and bonds . . . . .	1,147.6	151.7	-133.6	1,165.7	+18.1
Special bonds . . . . .	238.6	46.4	-32.8	252.5	+13.7
Drought bonds . . . . .	0.7	0.2	-0.3	0.6	-0.1
Advance loan subscriptions . . . . .	13.6	0.4	..	14.0	+0.4
Overdue securities . . . . .	5.4	..	-1.4	4.0	-1.4
Treasury notes . . . . .	269.8	(d)-9.7	..	260.1	-9.7
Treasury bills—Internal . . . . .	1,039.5	(d)-5.3	..	1,034.2	-5.3
Total . . . . .	2,715.5	183.6	-168.0	2,731.0	+15.6
States—					
Inscribed stock and bonds . . . . .	8,316.5	663.1	-91.8	8,887.6	+571.3
Special bonds . . . . .	578.9	92.8	-51.0	620.8	+41.8
Tax-free stock . . . . .	16.0	..	-0.1	15.8	-0.1
Stock issued to Government Savings banks under special agreement(b) . . . . .	277.0	24.5	-4.1	297.4	+20.4
Debentures . . . . .	42.4	..	-2.8	39.6	-2.8
Overdue securities . . . . .	..	..	..	..	..
Total . . . . .	9,230.6	780.4	-149.8	9,861.2	+630.6
Total securities repayable in Australian currency . . . . .	11,946.1	964.0	-317.8	12,592.2	+646.2
Securities repayable in overseas currencies(c)—					
Commonwealth—					
Public loans . . . . .	438.4	38.9	-20.1	457.2	+18.8
Export-Import Bank loans—					
Defence equipment . . . . .	266.6	48.4	-81.3	233.7	-32.9
Aircraft . . . . .	53.2	n.a.	..	64.8	+11.6
Other . . . . .	41.0	..	-4.8	36.2	-4.8
International Bank Loans . . . . .	115.3	..	-20.9	94.4	-20.9
Private loans—					
Aircraft . . . . .	79.3	n.a.	n.a.	96.9	+17.6
Other purposes . . . . .	91.6	..	+2.1	93.7	+2.1
Total . . . . .	1,085.4	161.0	-169.5	1,076.9	-8.5
States . . . . .	460.5	..	-94.9	365.6	-94.9
Total securities repayable in overseas currencies . . . . .	1,545.9	161.0	-264.4	1,442.5	-103.4

(a) Including conversions from one type of security to another. (b) i.e. State domestic raisings. (c) Australian currency equivalents at rates of exchange ruling at 30 June 1972. (d) Not issue.



**Government securities on issue, annual interest payable, and average rate of interest**

The following tables provide details of government securities on issue on account of the Commonwealth and the States, repayable in Australian and in overseas currencies, and show, for recent years, the securities on issue maturing in Australia classified by holder. Also shown are details of annual interest payable on securities on issue in Australia and overseas, and the average rate of interest liability.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES**  
**30 JUNE 1968 TO 1972**  
 (\$ million)

	30 June—				
	1968	1969	1970	1971	1972
<b>For Commonwealth purposes—</b>					
Repayable in Australian currency—					
Inscribed stock and bonds . . . . .	1,347.6	1,279.9	1,284.2	1,147.6	1,165.7
Special bonds . . . . .	198.1	201.8	238.3	238.9	252.5
Drought bonds . . . . .	..	..	0.9	0.7	0.6
Advance loan subscriptions . . . . .	18.8	26.5	5.4	13.6	14.0
Overdue securities . . . . .	10.7	4.1	6.6	5.4	4.0
Treasury notes . . . . .	273.7	205.4	252.0	269.8	260.1
Treasury bills—					
Internal . . . . .	685.0	859.2	1,031.2	1,039.5	1,034.2
Public . . . . .	141.0	14.0	..	..	..
<b>Total</b> . . . . .	2,675.0	2,591.0	2,818.6	2,715.5	2,731.0
Repayable in overseas currencies(a) . . . . .	925.3	1,091.2	1,066.3	1,085.4	1,076.9
<b>Total Commonwealth</b> . . . . .	3,600.3	3,682.1	3,884.9	3,800.9	3,807.9
<b>On account of States—</b>					
Repayable in Australian currency—					
Inscribed stock and bonds . . . . .	6,918.3	7,427.9	7,983.8	8,316.3	8,887.6
Special bonds . . . . .	454.9	478.3	495.2	578.9	620.8
Tax-free stock . . . . .	16.5	16.5	16.0	16.0	15.8
Stock issued to Government Savings banks under special agreements . . . . .	243.6	253.6	266.0	277.0	297.4
Debentures . . . . .	50.2	47.7	45.1	42.4	39.6
Overdue securities . . . . .	..	..	..	..	..
<b>Total</b> . . . . .	7,683.5	8,224.0	8,806.1	9,230.6	9,861.2
Repayable in overseas currencies(a) . . . . .	633.0	606.5	514.0	460.5	365.6
<b>Total States</b> . . . . .	8,316.5	8,830.5	9,320.1	9,691.1	10,226.8
<b>of which—</b>					
New South Wales . . . . .	2,772.8	2,931.3	3,078.7	3,192.9	3,359.4
Victoria . . . . .	1,998.6	2,130.3	2,254.4	2,347.8	2,488.3
Queensland . . . . .	1,094.9	1,164.9	1,236.0	1,289.5	1,355.7
South Australia . . . . .	1,077.0	1,145.8	1,211.3	1,256.9	1,332.0
Western Australia . . . . .	804.9	851.5	896.0	932.6	981.4
Tasmania . . . . .	568.3	606.7	643.8	671.3	709.9
<b>Total Commonwealth and States</b> . . . . .	11,916.8	12,512.6	13,205.0	13,492.0	14,034.7

(a) Australian currency equivalent.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATE  
MATURING IN AUSTRALIA, BY HOLDER(a), 30 JUNE 1968 TO 1972**

(\$ million)

(Source: Reserve Bank of Australia *Statistical Bulletin*)

Holder	30 June—				
	1968	1969	1970	1971	1972
Reserve Bank of Australia . . . . .	1,041	846	1,190	910	501
Trading banks . . . . .	1,194	1,367	1,279	1,412	1,788
Savings banks . . . . .	2,258	2,285	2,229	2,337	2,380
Other banking institutions . . . . .	7	12	1	1	3
Life assurance offices . . . . .	1,093	1,150	1,195	1,325	1,483
Fire, marine and general insurance offices . . . . .	123	126	128	120	117
Other private financial institutions—					
Pension and provident funds . . . . .	174	192	222	249	290
Friendly societies, hospital and medical funds . . . . .	25	29	29	31	34
Trustee companies . . . . .	122	115	113	108	109
Pastoral finance companies . . . . .	35	37	25	16	14
Money market dealers . . . . .	494	524	597	694	983
Miscellaneous . . . . .	80	104	61	74	111
Government financial institutions—					
Insurance offices and funds . . . . .	121	137	149	154	163
Pension and provident funds . . . . .	173	195	204	238	271
Public trustees . . . . .	28	26	24	26	24
All other(b) . . . . .	4	3	3	3	3
Public authorities (excluding finance)—					
Commonwealth Government (including Commonwealth semi-government) . . . . .	1,789	2,066	2,577	2,661	2,586
State Government . . . . .	58	57	40	39	42
Local government and State semi-government . . . . .	245	233	218	191	177
Companies (excluding finance) . . . . .	145	183	174	118	253
Other holders—					
Marketing boards . . . . .	6	3	3	3	2
Farmers . . . . .	87	83	80	76	73
Non-profit organisations . . . . .	52	48	51	50	50
All other . . . . .	1,003	993	1,032	1,107	1,135
<b>Total . . . . .</b>	<b>10,358</b>	<b>10,815</b>	<b>11,625</b>	<b>11,946</b>	<b>12,592</b>

(a) Total stock inscribed, bonds in circulation, amounts paid up on outstanding applications, in transit claims and advance applications, Commonwealth Treasury Bills and Treasury Notes, debentures, and Savings Certificates. (b) Includes securities held by Commonwealth Development Bank of Australia.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES  
REPAYABLE IN OVERSEAS CURRENCIES, 30 JUNE 1968 TO 1972**

		30 June—				
		1968	1969	1970	1971	1972
<b>For Commonwealth purposes—</b>						
Sterling . . . . .	£stg m	80.4	80.0	69.9	69.2	58.3
United States dollars . . . . .	US\$ m	705.1	748.1	687.2	691.9	689.1
Canadian dollars . . . . .	Can\$ m	39.9	29.7	24.8	12.3	5.2
Swiss francs . . . . .	Sw F m	239.7	239.7	249.6	249.6	249.6
Netherlands guilders . . . . .	f. m	6.7	6.2	5.7	65.2	64.8
Deutsche marks . . . . .	DM m	178.2	791.7	938.7	931.2	1,026.1
European units of account . . . . .	EuA m	..	..	..	..	15.0
<b>Total—Australian currency equivalent(a)</b> . . . . .		925.3	1,091.2	1,066.3	1,085.4	1,076.9
<b>On account of States—</b>						
Sterling . . . . .	£stg m	206.6	200.3	164.7	149.7	120.9
United States dollars . . . . .	US\$ m	181.1	167.3	149.8	126.2	107.4
Canadian dollars . . . . .	Can\$ m	13.0	12.8	12.2	11.6	10.9
Swiss francs . . . . .	Sw F m	50.3	50.3	50.3	50.3	50.3
Netherlands guilders . . . . .	f. m	30.7	28.5	26.3	24.1	21.9
<b>Total—Australian currency equivalent(a)</b> . . . . .		633.0	606.5	514.0	460.5	365.6
<b>Total—Commonwealth and States—Australian currency equivalent(a)</b> . . . . .		1,558.4	1,697.7	1,580.2	1,545.9	1,442.5

(a) Australian currency equivalent at rates of exchange ruling at 30 June in each of the years shown.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES  
REPAYABLE IN OVERSEAS CURRENCIES  
30 JUNE 1972**

	Currency in which repayable							Total— Australian currency equivalent (a)
	Sterling	United States dollars	Canadian dollars	Swiss francs	Netherland guilders	Deutsche marks	European units of account	
	£stg m	US\$ m	Can\$ m	Sw F m	f m	DM m	Eu A. m	\$A m
<b>For Commonwealth purposes—</b>								
Public loans . . . . .	68.3	91.9	2.1	239.7	4.8	650.0	15.0	457.2
Export-Import Bank loans—								
Defence equipment . . . . .	..	278.3	..	..	..	..	..	233.7
Aircraft . . . . .	..	77.2	..	..	..	..	..	64.8
Other . . . . .	..	43.1	..	..	..	..	..	36.2
International Bank loans . . . . .	..	88.0	2.2	..	..	71.6	..	94.4
Private loans—								
Aircraft . . . . .	..	110.5	0.9	9.9	..	4.5	..	96.9
Other purposes . . . . .	..	..	..	..	60.0	300.0	..	93.7
<b>Total</b> . . . . .	68.3	689.1	5.2	249.6	64.8	1,026.1	15.0	1,076.9
<b>On account of States—</b>								
New South Wales . . . . .	57.8	42.3	3.4	15.8	6.9	..	..	162.9
Victoria . . . . .	18.8	21.7	2.8	12.7	5.6	..	..	63.7
Queensland . . . . .	10.9	16.5	1.4	6.4	2.8	..	..	39.6
South Australia . . . . .	12.2	12.1	1.5	6.8	2.8	..	..	38.8
Western Australia . . . . .	18.3	6.8	1.1	4.9	2.2	..	..	46.0
Tasmania . . . . .	3.0	8.0	0.8	3.7	1.6	..	..	14.8
<b>Total</b> . . . . .	120.9	107.4	10.9	50.3	21.9	..	..	365.6
<b>Total Commonwealth and States</b> . . . . .	189.3	796.5	16.1	299.9	86.7	1,026.1	15.0	1,442.5

(a) At rates of exchange ruling at 30 June 1972.



**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES**  
**ANNUAL INTEREST PAYABLE, 30 JUNE 1968 TO 1972**

		30 June—				
		1968	1969	1970	1971	1972
AMOUNT						
<b>For Commonwealth purposes—</b>						
Australian currency . . .	\$A m	96.1	91.5	101.5	99.5	99.4
Sterling . . . . .	\$Stg m	4.3	4.2	3.9	3.9	3.8
United States dollars . . .	US\$ m	36.8	39.1	35.9	38.1	40.1
Canadian dollars . . . . .	Can\$ m	1.9	1.4	1.2	0.6	0.3
Swiss francs . . . . .	SwF m	10.5	11.4	13.6	13.6	13.6
Netherlands guilders . . .	f m	0.3	0.3	0.3	4.9	4.9
Deutsche marks . . . . .	DM m	11.0	50.4	61.1	60.6	67.3
European units of account .	EuA m	..	..	..	..	1.2
<b>Total Commonwealth—Australian currency equivalent(a) . . . . .</b>	<b>\$A m</b>	<b>144.3</b>	<b>150.3</b>	<b>160.6</b>	<b>162.0</b>	<b>164.1</b>
<b>On account of States—</b>						
Australian currency . . . .	\$A m	373.1	404.9	449.3	496.1	546.2
Sterling . . . . .	\$Stg m	8.9	8.7	7.5	6.9	5.7
United States dollars . . . .	US\$ m	9.5	8.7	7.9	6.8	5.8
Canadian dollars . . . . .	Can\$ m	0.7	0.7	0.7	0.7	0.6
Swiss francs . . . . .	SwF m	2.3	2.3	2.3	2.3	2.3
Netherlands guilders . . . .	f m	1.5	1.4	1.3	1.2	1.1
<b>Total States—Australian currency equivalent(a) . . . . .</b>	<b>\$A m</b>	<b>402.2</b>	<b>432.8</b>	<b>473.9</b>	<b>518.3</b>	<b>564.0</b>
<b>Total Commonwealth and States—Australian currency equivalent(a) . . . . .</b>	<b>\$A m</b>	<b>546.5</b>	<b>583.1</b>	<b>634.5</b>	<b>680.2</b>	<b>728.2</b>

**AVERAGE RATE OF INTEREST LIABILITY**  
**(Per cent)**

<b>For Commonwealth purposes—</b>						
Australian currency . . . . .		3.60	3.53	3.60	3.66	3.64
Sterling . . . . .		5.29	5.29	5.57	5.57	5.59
United States dollars . . . .		5.23	5.23	5.22	5.50	5.82
Canadian dollars . . . . .		4.70	4.72	4.69	5.18	5.51
Swiss francs . . . . .		4.40	4.77	5.44	5.44	5.44
Netherlands guilders . . . .		5.00	5.00	5.00	7.53	7.55
Deutsche marks . . . . .		6.17	6.37	6.51	6.51	6.56
European units of account . .		..	..	..	..	8.00
<b>Total Commonwealth—Australian currency equivalent(a) . . . . .</b>		<b>4.02</b>	<b>4.08</b>	<b>4.13</b>	<b>4.26</b>	<b>4.31</b>
<b>On account of States—</b>						
Australian currency . . . . .		4.86	4.92	5.10	5.37	5.54
Sterling . . . . .		4.32	4.35	4.56	4.59	4.68
United States dollars . . . .		5.25	5.21	5.29	5.36	5.39
Canadian dollars . . . . .		5.75	5.75	5.75	5.75	5.75
Swiss francs . . . . .		4.50	4.50	4.50	4.50	4.50
Netherlands guilders . . . .		5.00	5.00	5.00	5.00	5.00
<b>Total States—Australian currency equivalent(a) . . . . .</b>		<b>4.84</b>	<b>4.90</b>	<b>5.08</b>	<b>5.35</b>	<b>5.51</b>
<b>Total Commonwealth and States—Australian currency equivalent(a) . . . . .</b>		<b>4.59</b>	<b>4.66</b>	<b>4.80</b>	<b>5.04</b>	<b>5.19</b>

(a) At rates of exchange ruling at 30 June in each of the years shown.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES  
ANNUAL INTEREST PAYABLE, 30 JUNE 1972**

	Currency in which payable								Total—
	Australian currency	Sterling	United States dollars	Canadian dollars	Swiss francs	Nether- lands guilders	Deutsche marks	European units of account	Australian currency equiva- lent(a)
For Commonwealth purposes	\$A m	\$Stg m	US\$ m	Can\$ m	Sw F m	f m	DM m	Eu A m	\$A m
On account of States—	99.4	3.8	40.1	0.3	13.6	4.9	67.3	1.2	164.1
New South Wales . . . .	178.5	2.8	2.3	0.2	0.7	0.3	..	..	186.7
Victoria . . . . .	134.6	1.0	1.2	0.2	0.6	0.3	..	..	138.1
Queensland . . . . .	70.6	0.5	0.9	0.1	0.3	0.1	..	..	72.6
South Australia . . . .	72.0	0.5	0.6	0.1	0.3	0.1	..	..	73.6
Western Australia . . .	52.0	0.7	0.4	0.1	0.2	0.1	..	..	53.8
Tasmania . . . . .	38.5	0.1	0.4	..	0.2	0.1	..	..	39.2
<i>Total States</i> . . . .	<i>546.2</i>	<i>5.7</i>	<i>5.8</i>	<i>0.6</i>	<i>2.3</i>	<i>1.1</i>	<i>..</i>	<i>..</i>	<i>564.0</i>
<b>Total—</b>									
Currencies in which repayable . . . . .	645.6	9.5	45.9	0.9	15.8	6.0	67.3	1.2	..
Australian currency equivalent(a) \$A m	645.6	19.6	38.5	0.8	3.5	1.5	17.5	1.1	728.2

**AVERAGE RATE OF INTEREST LIABILITY  
(Per cent)**

For Commonwealth purposes	3.64	5.59	5.82	5.51	5.44	7.55	6.56	8.00	4.31
On account of States—									
New South Wales . . . .	5.58	4.89	5.38	5.75	4.50	5.00	..	..	5.56
Victoria . . . . .	5.55	5.52	5.35	5.75	4.50	5.00	..	..	5.55
Queensland . . . . .	5.36	4.78	5.47	5.75	4.50	5.00	..	..	5.35
South Australia . . . .	5.56	3.85	5.38	5.75	4.50	5.00	..	..	5.53
Western Australia . . .	5.56	3.63	5.28	5.75	4.50	5.00	..	..	5.48
Tasmania . . . . .	5.53	4.99	5.45	5.75	4.50	5.00	..	..	5.53
<i>Total States</i> . . . .	<i>5.54</i>	<i>4.68</i>	<i>5.39</i>	<i>5.75</i>	<i>4.50</i>	<i>5.00</i>	<i>..</i>	<i>..</i>	<i>5.51</i>
<b>Grand total</b> . . . .	<b>5.13</b>	<b>5.01</b>	<b>5.76</b>	<b>5.67</b>	<b>5.28</b>	<b>6.90</b>	<b>6.56</b>	<b>8.00</b>	<b>5.19</b>

(a) At rates of exchange ruling at 30 June 1972.

## National Debt Sinking Fund

### Securities on issue on behalf of the Commonwealth

The National Debt Sinking Fund was established by the *National Debt Sinking Fund Act 1923–1959* and came into operation on 11 August 1923. Particulars of the creation and operation of sinking funds by that Act are included in issues of the Year Book prior to No. 23. The *National Debt Sinking Fund Act 1966* repealed all previous legislation on sinking funds relating to securities on issue on behalf of the Commonwealth. Under the Act of 1966 the period of redemption is 25 years from 1 July 1966 for debt outstanding at 30 June 1966 and 25 years for net debt created in subsequent years.

Broadly, the amounts payable to the National Debt Sinking Fund each year are made up of contributions from the Consolidated Revenue Fund of the Commonwealth as follows:

- (a) an amount of \$30.94 million each year for a period of 25 years;
- (b) an amount equal to 4 per cent of the amount of net debt created (if any) in any year for a period of 25 years.

In addition, an amount equal to specified receipts by the Commonwealth in repayment of loans or advances made out of moneys in the Loan Fund will be paid to the Sinking Fund.

The amounts payable to the Fund in any year from Consolidated Revenue Fund are to be reduced by the following:

(a) the net income from investments in any year; and

(b) an amount equal to 4 per cent of the amount of the net reduction of debt in any year.

Particulars of receipts and expenditure of the Commonwealth Account for the years 1967-68 to 1971-72 are as follows.

**NATIONAL DEBT SINKING FUND: COMMONWEALTH ACCOUNT, 1967-68 TO 1971-72**  
(£'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Receipts—</b>					
From Consolidated Revenue . . . . .	25,421	32,832	26,351	21,061	17,812
Loans and advances repaid . . . . .	13,772	14,909	84,069	272,483	157,376
War Service Homes money repaid . . . . .	(a)	(a)	(a)	(a)	(a)
Interest on investments . . . . .	7,665	5,502	3,786	2,968	1,359
<b>Total receipts . . . . .</b>	<b>46,859</b>	<b>53,243</b>	<b>114,206</b>	<b>296,512</b>	<b>176,547</b>
<b>Expenditure (net cost)—</b>					
Securities repurchased and redeemed in—					
Australia . . . . .	68,019	33,340	113,083	293,179	149,373
London . . . . .	5,983	693	21,386	1,230	1,737
New York(b) . . . . .	26,145	28,253	28,319	22,941	26,207
Canada . . . . .	122	28	83	90	93
Netherlands . . . . .	118	119	119	119	124
<b>Total expenditure . . . . .</b>	<b>100,386</b>	<b>62,434</b>	<b>162,990</b>	<b>317,558</b>	<b>117,534</b>
<b>Balance at 30 June . . . . .</b>	<b>140,587</b>	<b>131,396</b>	<b>82,612</b>	<b>61,565</b>	<b>60,578</b>
<b>Face value of securities repurchased and redeemed in—</b>					
Australia . . . . .	68,287	33,473	114,333	294,367	149,513
London . . . . .	6,043	876	21,678	1,436	1,887
New York(b) . . . . .	26,569	29,624	29,514	23,771	26,438
Canada . . . . .	135	32	108	101	108
Netherlands . . . . .	118	118	118	119	123
<b>Total face value . . . . .</b>	<b>101,151</b>	<b>64,123</b>	<b>165,751</b>	<b>319,794</b>	<b>178,069</b>

(a) In the years 1967-68 to 1971-72 principal repayments were credited to Consolidated Revenue Fund. (b) Includes instalment repayments of loans from International Bank for Reconstruction and Development: 1967-68—face value, \$20.8m, net cost, \$20.2m; 1968-69—face value, \$21.8m, net cost, \$21.1m; 1969-70—face value, \$17.6m, net cost, \$17.4m; 1970-71—face value, \$13.2m, net cost, \$13.1m; 1971-72—face value, \$12.9m, net cost, \$13.1m.



**Securities on issue on behalf of States**

A sinking fund for the redemption of the securities on issue on behalf of States was established under the Financial Agreement. Particulars of the transactions of the National Debt Sinking Fund (States' Account) for each State during the year 1971-72 and for all States during the years 1967-68 to 1971-72 are shown in the following tables.

**NATIONAL DEBT SINKING FUND: STATES' ACCOUNT, 1971-72**  
(\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>Receipts—</b>							
Contributions under Financial Agreement—							
Commonwealth . . .	8,673	6,378	3,431	3,458	2,557	1,825	26,323
States . . . . .	32,123	23,816	12,228	12,526	10,302	5,579	96,572
Interest from States on cancelled securities . .	52	30	17	16	16	7	139
Special contributions by States .	63	25	13	..	6	..	107
Interest on investments, etc. .	51	44	12	18	9	7	140
<b>Total receipts . . . .</b>	<b>40,961</b>	<b>30,293</b>	<b>15,701</b>	<b>16,018</b>	<b>12,890</b>	<b>7,417</b>	<b>123,280</b>
<b>Expenditure (net cost)—</b>							
Securities repurchased and redeemed in—							
Australia . . . . .	30,746	22,236	13,412	12,193	9,256	6,532	94,374
London . . . . .	6,179	1,911	558	1,020	1,672	234	11,574
New York . . . . .	3,837	3,978	2,906	2,134	1,224	919	14,999
Canada . . . . .	154	123	62	65	47	36	486
Netherlands . . . . .	180	145	74	73	57	42	571
<b>Total expenditure . . .</b>	<b>41,096</b>	<b>28,393</b>	<b>17,011</b>	<b>15,485</b>	<b>12,256</b>	<b>7,763</b>	<b>122,005</b>
Balance at 30 June 1971 . .	4,219	5,065	415	2,012	1,216	209	13,137
<b>Face value of securities repurchased and redeemed in—</b>							
Australia . . . . .	30,754	22,240	13,412	12,197	9,256	6,532	94,392
London(a) . . . . .	5,994	1,980	580	1,039	1,663	240	11,496
New York(a) . . . . .	2,051	2,017	1,480	1,083	620	477	7,728
Canada(a) . . . . .	85	69	34	37	26	20	271
Netherlands(a) . . . . .	114	92	47	46	36	27	362
<b>Total face value . . . .</b>	<b>39,000</b>	<b>26,399</b>	<b>15,553</b>	<b>14,402</b>	<b>11,601</b>	<b>7,295</b>	<b>114,250</b>

(a) Converted in accordance with the Financial Agreement at the equivalent of the mint par of exchange prevailing on 1 July 1927.

**NATIONAL DEBT SINKING FUND: STATES' ACCOUNT, 1967-68 TO 1971-72**  
(\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Receipts—</b>					
Contributions under Financial Agreement—					
Commonwealth . . . . .	20,387	21,619	23,271	24,550	26,323
States . . . . .	73,486	78,807	83,484	90,162	96,572
Interest from States on cancelled securities . . . . .	93	126	173	162	139
Special contributions by States . . . . .	143	138	138	123	107
Interest on investments, etc. . . . .	48	—220	828	70	140
<b>Total receipts . . . . .</b>	<b>94,157</b>	<b>100,469</b>	<b>107,895</b>	<b>115,067</b>	<b>123,280</b>
<b>Expenditure (net cost)—</b>					
Securities repurchased and redeemed in—					
Australia . . . . .	50,568	45,120	81,284	87,693	94,374
London . . . . .	31,815	12,333	40,526	10,824	11,574
New York . . . . .	11,330	11,126	10,584	11,841	14,999
Canada . . . . .	631	145	433	462	486
Netherlands . . . . .	543	546	545	547	571
<b>Total expenditure . . . . .</b>	<b>94,886</b>	<b>69,270</b>	<b>133,372</b>	<b>111,367</b>	<b>122,005</b>
<b>Balance at 30 June . . . . .</b>	<b>2,440</b>	<b>33,639</b>	<b>8,162</b>	<b>11,862</b>	<b>13,137</b>
<b>Face value of securities repurchased and redeemed in—</b>					
Australia . . . . .	50,586	45,127	81,367	87,705	94,392
London(a) . . . . .	28,953	13,543	40,565	11,438	11,496
New York(a) . . . . .	5,629	12,318	5,582	5,995	7,728
Canada(a) . . . . .	348	167	266	245	271
Netherlands(a) . . . . .	677	540	362	362	362
<b>Total face value . . . . .</b>	<b>86,193</b>	<b>71,695</b>	<b>128,142</b>	<b>105,745</b>	<b>114,250</b>

(a) Converted in accordance with the Financial Agreement at the equivalent of the mint par of exchange prevailing on 1 July 1927.

### State and Local Authorities' Indebtedness

The statistics of indebtedness of State and local authorities set out in the two following tables have been compiled from returns supplied by all local authorities (including New South Wales County Councils), and by autonomous and semi-autonomous State authorities which have independent borrowing powers, i.e. the power to borrow other than by having Commonwealth securities issued on their behalf—and which have in fact exercised these powers in borrowing from the public under the provisions of the Loan Council's 'Gentleman's Agreement.'

The State authorities covered by these statistics include the authorities responsible for providing the following services.

*New South Wales.* Water Supply, Sewerage and Drainage, Electricity and Gas Supply, Fire Brigades, Banking, Housing, Harbours, Grain Elevators, Roads and Bridges, Marketing, Industry Assistance, and Miscellaneous . . . . .

*Victoria.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Transport, Electricity and Gas Supply, Roads and Bridges, Fire Brigades, Marketing (Buying and Selling), Industry Assistance, Grain Elevators, and Housing.

*Queensland.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Transport, Electricity Supply, Fire Brigades, University, Hospitals and Ambulances, Marketing (Buying and Selling and Agency), and Industry Assistance.

*South Australia.* Irrigation and Drainage, Transport, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Industry Assistance, Banking, Housing, University and Miscellaneous.

*Western Australia.* Water Supply and Sewerage, Harbours, Transport, Electricity Supply, Fire Brigades, Hospitals, Marketing (Agency), Housing, University, and Miscellaneous.

*Tasmania.* Harbours, Electricity Supply, Fire Brigades, Transport, Housing, Industry Assistance and Water Supply.

In the tables which follow, debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalised and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more are included. Current liabilities, such as interest accrued (but not capitalised), trade creditors, amounts held in trust, and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds less all bank credit balances (including fixed deposits) which do not form part of a sinking fund to repay a loan. New loans raised during the year include new loan liabilities incurred during the year, loans raised from the public to repay indebtedness to the Government, and interest capitalised. Loans raised and redeemed within the year, increases in overdrafts, and loans raised for conversion or redemption of existing debt are excluded. Funds provided for redemption include instalments of principal repaid and amounts credited to sinking funds established for the purpose of repaying the debt on maturity. Amounts provided for redemption from loans raised for that purpose are excluded.

**STATE AND LOCAL AUTHORITIES: NEW MONEY LOAN RAISINGS, REDEMPTION AND DEBT**  
**1966-67 TO 1970-71**  
 (\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>STATE AUTHORITIES</b>					
New money loan raisings—					
From government . . . . .	149.1	171.3	187.5	200.1	191.7
From public . . . . .	221.4	246.5	293.6	275.2	319.3
<b>Total loan raisings . . . . .</b>	<b>370.5</b>	<b>417.8</b>	<b>481.0</b>	<b>475.3</b>	<b>511.0</b>
Funds provided for redemption—					
Government loans . . . . .	26.2	29.0	28.4	31.1	36.5
Loans due to public . . . . .	43.1	63.3	66.0	67.5	74.6
<b>Total funds for redemption . . . . .</b>	<b>69.3</b>	<b>92.3</b>	<b>94.4</b>	<b>98.6</b>	<b>111.1</b>
Accumulated sinking fund balance . . . . .	178.6	196.5	214.8	233.3	240.7
Debt—					
Due to government . . . . .	2,299.0	2,441.2	2,600.7	2,769.8	2,930.8
Due to banks (net overdraft) . . . . .	7.5	7.0	9.4	9.0	7.4
Due to public(a) . . . . .	2,677.0	2,878.5	3,130.2	3,357.9	3,614.0
<b>Total debt . . . . .</b>	<b>4,983.5</b>	<b>5,326.7</b>	<b>5,740.3</b>	<b>6,136.8</b>	<b>6,552.2</b>
of which—					
Maturing overseas(a) . . . . .	11.8	5.8	1.6	..	1.4
<b>LOCAL AUTHORITIES</b>					
New money loan raisings—					
From government . . . . .	5.2	5.6	8.6	8.2	6.6
From public . . . . .	157.6	178.4	184.3	179.5	191.0
<b>Total loan raisings . . . . .</b>	<b>162.8</b>	<b>184.0</b>	<b>192.9</b>	<b>187.7</b>	<b>197.6</b>
Funds provided for redemption—					
Government loans . . . . .	3.9	3.7	3.5	3.4	3.4
Loans due to public . . . . .	66.6	71.9	79.0	85.4	89.0
<b>Total funds for redemption . . . . .</b>	<b>70.5</b>	<b>75.6</b>	<b>82.5</b>	<b>88.8</b>	<b>92.4</b>
Accumulated sinking fund balance . . . . .	73.8	81.3	91.5	97.7	107.9
Debt—					
Due to government . . . . .	58.3	60.2	65.0	69.9	72.9
Due to banks (net overdraft) . . . . .	9.2	4.3	4.8	3.8	3.3
Due to public(a) . . . . .	1,215.4	1,328.0	1,443.2	1,545.2	1,654.3
<b>Total debt . . . . .</b>	<b>1,282.9</b>	<b>1,392.5</b>	<b>1,513.0</b>	<b>1,618.8</b>	<b>1,730.5</b>
of which—					
Maturing overseas(a) . . . . .	4.3	3.6	3.2	2.8	2.5

(a) Includes debt payable in London and New York, converted to Australian currency equivalent at the I.M.F. rates of exchange applying as at 30 June in each of the years shown.



**STATE AND LOCAL AUTHORITIES: NEW MONEY LOAN RAISINGS, REDEMPTION  
DEBT AND INTEREST PAYABLE, 1970-71**

(\$ million)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>STATE AUTHORITIES</b>							
New money loan raisings—							
From government . . . . .	34.8	52.4	3.2	34.5	35.9	30.8	191.7
From public . . . . .	84.8	142.8	42.9	20.2	18.7	9.9	319.3
<b>Total loan raisings . . . . .</b>	<b>119.5</b>	<b>195.2</b>	<b>46.1</b>	<b>54.8</b>	<b>54.6</b>	<b>40.7</b>	<b>511.0</b>
Funds provided for redemption—							
Government loans . . . . .	11.0	8.9	3.6	7.2	2.2	3.6	36.5
Loans due to public . . . . .	21.1	35.2	12.0	1.2	2.6	2.5	74.6
<b>Total funds for redemption . . . . .</b>	<b>32.1</b>	<b>44.1</b>	<b>15.6</b>	<b>8.4</b>	<b>4.8</b>	<b>6.1</b>	<b>111.1</b>
Accumulated sinking fund balance . . . . .	132.7	70.6	22.7	0.1	8.0	6.5	240.7
Debt—							
Due to government . . . . .	637.3	862.6	84.0	504.3	446.5	396.1	2,930.8
Due to banks (net overdraft) . . . . .	2.6	0.7	..	0.1	3.9	..	7.4
Due to public creditor (a) . . . . .	872.3	1,872.7	410.5	219.6	152.4	86.5	3,614.0
<b>Total debt(a) . . . . .</b>	<b>1,512.1</b>	<b>2,736.1</b>	<b>494.5</b>	<b>724.1</b>	<b>602.8</b>	<b>482.6</b>	<b>6,552.2</b>
of which—							
Maturing overseas(a) . . . . .	..	1.4	..	..	..	..	1.4
Annual interest payable(a) . . . . .	81.6	146.6	28.3	37.6	32.8	24.7	351.6
<b>LOCAL AUTHORITIES</b>							
New money loan raisings—							
From government . . . . .	0.2	0.5	4.9	0.9	..	..	6.6
From public . . . . .	83.2	26.1	48.7	10.3	15.7	6.9	191.0
<b>Total loan raisings . . . . .</b>	<b>83.5</b>	<b>26.6</b>	<b>53.6</b>	<b>11.3</b>	<b>15.7</b>	<b>7.0</b>	<b>197.6</b>
Funds provided for redemption—							
Government loans . . . . .	0.6	0.2	1.8	0.7	..	..	3.4
Loans due to public . . . . .	39.7	16.3	20.5	2.9	6.4	3.4	89.0
<b>Total funds for redemption . . . . .</b>	<b>40.3</b>	<b>16.5</b>	<b>22.3</b>	<b>3.5</b>	<b>6.4</b>	<b>3.4</b>	<b>92.4</b>
Accumulated sinking fund balance . . . . .	50.2	16.4	38.8	0.3	..	2.2	107.9
Debt—							
Due to government . . . . .	6.2	8.0	50.8	6.9	..	0.9	72.9
Due to banks (net overdraft) . . . . .	1.8	1.4	..	0.1	..	..	3.3
Due to public creditor(a) . . . . .	763.4	237.3	434.1	62.1	82.6	74.8	1,654.3
<b>Total debt(a) . . . . .</b>	<b>771.4</b>	<b>246.7</b>	<b>484.9</b>	<b>69.1</b>	<b>82.6</b>	<b>75.8</b>	<b>1,730.5</b>
of which—							
Maturing overseas(a) . . . . .	..	..	2.5	..	..	..	2.5
Annual interest payable(a) . . . . .	43.5	14.4	28.2	4.0	5.0	4.4	99.5

(a) Includes debt or interest payable in London and New York, converted to Australian currency equivalent at the I.M.F. rates of exchange applying as at 30 June 1971.

### Aggregate debt of State and local authorities

The following table brings together figures of Commonwealth securities on issue on account of the States, debt outstanding of State authorities which have borrowed directly, and debt outstanding of local authorities, to provide an indication of the level of indebtedness of the public authorities in each State. It should be noted, however, that for the kinds of reasons outlined on page 601, this aggregation of figures for securities on issue and debt outstanding cannot be taken as a measure of the 'net public debt' of the State and local authorities. In order to measure this latter magnitude it would be necessary to identify and deduct the substantial holdings of Commonwealth, State and local securities which represent the investment by these authorities of reserve funds and trust and other funds which they administer. In addition, it would be necessary to include the indebtedness of the State authorities to the Commonwealth in respect of advances made for specific capital purposes (such as those made under the Commonwealth-State Housing Agreements). For some purposes too it might be necessary to identify and deduct any loans outstanding from governments to other sectors.

## STATE AND LOCAL AUTHORITIES' INDEBTEDNESS, 30 JUNE 1967 TO 1971

<i>State authorities</i>							
<i>Commonwealth securities issued on account of States</i>				<i>State authorities' own borrowings(a)</i>	<i>Local authorities(a)</i>	<i>Total</i>	
AMOUNT OUTSTANDING							
(\$ million)(b)							
30 June 1971—							
New South Wales	.	.	.	3,192.9	874.8	765.2	4,832.9
Victoria	.	.	.	2,347.8	1,873.5	238.7	4,460.0
Queensland	.	.	.	1,289.5	410.5	434.1	2,134.1
South Australia	.	.	.	1,256.9	219.8	62.2	1,538.9
Western Australia	.	.	.	932.6	156.3	82.6	1,171.5
Tasmania	.	.	.	671.3	86.5	74.9	832.7
All States, 30 June 1971	.	.	.	9,691.1	3,621.4	1,657.6	14,970.1
1970	.	.	.	9,320.1	3,365.2	1,548.9	14,234.3
1969	.	.	.	8,830.5	3,139.6	1,447.9	13,418.0
1968	.	.	.	8,316.5	2,885.5	1,332.3	12,534.3
1967	.	.	.	7,934.1	2,684.5	1,224.6	11,843.2
PER HEAD OF POPULATION							
(\$)(b)							
30 June 1971—							
New South Wales	.	.	.	693.9	190.1	166.3	1,050.4
Victoria	.	.	.	670.3	534.9	68.2	1,273.4
Queensland	.	.	.	705.8	224.7	237.6	1,168.0
South Australia	.	.	.	1,070.9	187.3	53.0	1,311.2
Western Australia	.	.	.	905.0	151.7	80.2	1,136.8
Tasmania	.	.	.	1,719.5	221.6	191.9	2,132.9
All States, 30 June 1971	.	.	.	773.7	289.1	132.3	1,195.2
1970	.	.	.	763.8	275.8	126.9	1,165.6
1969	.	.	.	738.5	262.6	121.1	1,122.2
1968	.	.	.	708.5	245.8	113.5	1,067.9
1967	.	.	.	687.3	232.5	106.1	1,025.9

(a) Amounts due to central government have been excluded.  
to the Australian currency equivalent.

(b) Debts repayable overseas have been converted

## ROADS AND BRIDGES: WATER SUPPLY AND SEWERAGE: HARBOURS

As indicated elsewhere in this chapter, further details of the activities of public authorities engaged in particular fields of activity such as defence, transport and communication, health and welfare, education, electricity supply, banking, etc., may be found in other chapters of this Year Book which deal specifically with those subjects. However, it has been convenient for the time being to include in this chapter an account of the activities of authorities engaged in the fields of construction and maintenance of roads and bridges, provision of water supply and sewerage services and provision of harbour facilities. Particular attention is given to the activities of State authorities engaged in these fields.

## Roads and Bridges

Primary responsibility for the construction and maintenance of roads and bridges rests with State and local authorities. In each State there exists a central road authority or a government department which undertakes construction, reconstruction and maintenance of declared 'main' and 'developmental' roads, and which administers the distribution of funds to local authorities and supervises and co-ordinates road construction throughout the State. Provision of roads and bridges has always

been one of the principal functions of local authorities, and these authorities still account for a significant proportion of construction and maintenance activity, as is shown by figures given earlier in this chapter. However the relative importance of the contribution of local authorities has tended to decline in recent years, reflecting in part a reassessment of priorities in allocations of road finance. The Commonwealth Government is concerned with construction and maintenance of roads and bridges in the Northern Territory and Australian Capital Territory and roads of access to Commonwealth property in the various States; but the Commonwealth's most significant contribution to government activity in this field is in the provision of specific purpose capital grants to the States under the Commonwealth Aid Roads Acts, which constituted about 30 per cent of the total outlay by State and local authorities on roads and bridges in 1970-71.

In what follows, figures are provided of expenditure on roads and bridges by all public authorities, Commonwealth grants for road purposes, and an account is given of the activities of the principal State authorities concerned with roads and bridges in each State. For details of mileages of roads open to traffic, classified according to class of road and road surface, see Chapter 12, Transport, Communication and Travel.

#### All public authorities

The figures given in the following table provide an approximate measure of the aggregate net expenditure on roads and bridges by Commonwealth, State and local authorities in recent years. Expenditure on roads by those authorities whose primary activity is directed towards functions other than roads, e.g. electricity, forestry, housing, etc., is not included. The figures cover expenditure on the construction, reconstruction and maintenance of roads and bridges, and direct administration. Debt charges are not normally classified by function and are therefore excluded. Because a satisfactory and consistent distinction between new construction and maintenance cannot be made with existing data, all expenditure on roads and bridges is treated as capital expenditure.

#### ALL PUBLIC AUTHORITIES: GROSS FIXED CAPITAL EXPENDITURE, ROADS AND BRIDGES, 1967-68 TO 1971-72 (\$ million)

Year	Common- wealth authorities	State and local authorities					Tas.	All public authorities
		N.S.W.	Vic.	Qld	S.A.	W.A.		
1967-68	20	174	145	91	47	49	18	545
1968-69	23	190	160	93	49	51	18	585
1969-70	23	196	170	104	57	60	19	628
1970-71	30	225	170	109	58	67	21	680
1971-72(a)	29	247	198	119	69	74	18	754

(a) Estimated.

#### Commonwealth grants

The following table shows the allocations to the States under the several Commonwealth Aid Roads Acts for road construction, maintenance, repair and other works connected with transport for each of the years 1967-68 to 1971-72. After 1 July 1959, when the *Commonwealth Aid Roads Act* 1959 came into operation, the Commonwealth made separate provision for expenditure on strategic roads and the promotion of road safety practices.

#### ROAD CONSTRUCTION, MAINTENANCE, ETC : GRANTS UNDER THE COMMONWEALTH AID ROADS ACTS, STATES, 1967-68 TO 1971-72 (\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
1967-68	44,467	31,286	29,266	18,384	28,597	8,000	160,000
1968-69	47,319	33,113	31,098	19,433	30,537	8,500	170,000
1969-70	57,060	38,160	34,740	21,000	32,940	9,100	193,000
1970-71	64,980	43,460	39,560	23,500	36,270	10,230	218,000
1971-72	74,500	49,820	45,360	25,500	39,250	10,820	245,250



## New South Wales

Main roads administration is organised as a separate department under the control of a Commissioner. The activities of the Department of Main Roads include works on main, secondary, developmental and tourist roads throughout the State, all roads in the unincorporated portion of the Western Division, and certain associated works, principally bridges and vehicular ferries, constructed and maintained from government funds. The Department of Main Roads co-operates with the municipal and shire councils in the work of constructing and maintaining the main roads system.

During 1971-72 changes were made in the method of financing road construction. The New South Wales Government decided that as from 1 January 1972, the full cost of works carried out by the Department of Main Roads was to be met from the Department's own funds. Prior to this date, local councils, in the County of Cumberland were required to meet half the cost of secondary roads construction and a proportion of the cost of tourist roads; and in country districts, councils were required to meet a proportion of the cost of road and bridge construction and maintenance on roads other than State highways. The financial burden was therefore removed from councils in respect of works under the control of the Department of Main Roads. Councils continued to perform work on those roads for which they were responsible in the past.

The funds of the Department of Main Roads are derived principally from motor vehicle taxation, charges on heavy commercial goods vehicles under the Road Maintenance (Contribution) Act, 1958, grants under Commonwealth Aid Roads Acts (*see* page 616), other grants from the State or Commonwealth Governments, and proceeds of a levy on municipal and shire councils in the County of Cumberland in accordance with the Main Roads Act, 1924. The State Government also makes repayable advances for Main Roads Department works, and since 1963 the Commissioner for Main Roads has had the power (with the approval of the Governor on the recommendation of the Treasurer) to borrow moneys. The figures shown below represent the aggregate revenue and expenditure of the following funds: the County of Cumberland Main Roads General and Special Purposes Funds, the Country Main Roads General and Special Purposes Funds, and the Aid Roads Fund.

**DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES: REVENUE  
AND EXPENDITURE, 1967-68 TO 1971-72**  
(*\$'000*)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>REVENUE(a)</b>					
Motor vehicle taxation, registration and licence fees . . . . .	45,248	49,636	52,519	55,237	73,637
Commonwealth Aid Roads Acts . . . . .	28,013	29,814	40,207	47,279	55,917
State and Commonwealth grants . . . . .	..	..	..	2,400	655
Contributions by other departments and bodies . . . . .	516	350	1,194	1,154	776
Local authorities' contributions—					
Under section 11 of Mains Roads Act . . . . .	8,241	7,538	9,820	11,407	5,890
Other . . . . .	385	262	30	275	645
Sydney-Newcastle Expressway Toll . . . . .	892	1,530	2,096	2,271	2,564
Other . . . . .	652	859	776	1,047	1,020
<b>Total . . . . .</b>	<b>83,947</b>	<b>89,989</b>	<b>106,642</b>	<b>121,070</b>	<b>141,104</b>
<b>EXPENDITURE(b)</b>					
Roads and bridges—					
Construction . . . . .	64,534	67,950	79,999	92,154	98,055
Maintenance . . . . .	17,352	19,719	22,114	22,661	25,815
Administration . . . . .	4,816	5,379	6,133	7,373	9,413
Interest, exchange, etc., on debt . . . . .	2,094	2,541	3,126	3,802	4,331
Other(c) . . . . .	1,705	2,229	3,185	3,294	2,849
<b>Total . . . . .</b>	<b>90,501</b>	<b>97,819</b>	<b>114,555</b>	<b>129,283</b>	<b>140,464</b>

(a) Excludes repayable advances by the State Government and private loans (\$8,750,000 in 1967-68, \$12,900,000 in 1968-69, \$10,600,000 in 1969-70, \$11,250,000 in 1970-71, and \$8,800,000 in 1971-72), and transfers from Sydney Harbour Bridge Account for Expressway construction (\$4,775,000 in 1967-68, \$900,000 in 1968-69, \$224,000 in 1969-70, \$70,000 in 1970-71, and \$57,000 in 1971-72). Expenditure from these amounts is fully reflected in expenditure. (b) Excludes debt redemption (\$477,000 in 1967-68, \$812,000 in 1968-69, \$984,000 in 1969-70, \$1,365,000 in 1970-71, and \$1,674,000 in 1971-72) and repayment of government advances (\$200,000 in 1967-68 and later years). (c) Mainly purchase of assets not subject to annual depreciation charge. The purchase of other assets is omitted here because the depreciation charge for them is reflected each year in 'Roads and bridges'.

Toll facilities operated by the Department of Main Roads include the Sydney Harbour Bridge and completed sections of the Sydney-Newcastle Expressway.

The Sydney Harbour Bridge was opened for traffic on 19 March 1932, and has a main span of 1,650 feet with clearance for shipping of 170 feet. The deck, 160 feet wide, carries eight road traffic lanes, two railway tracks, one cycleway and one footway. During 1971-72, approximately 50.2 million private road vehicles, 25.4 million rail passengers and 9.6 million bus passengers crossed the bridge. Income from tolls during 1971-72 amounted to \$5,001,000, including road tolls of \$4,707,000, rail passenger tolls \$272,000 and bus passenger tolls \$22,000.

The sections of the Sydney-Newcastle Expressway now open to traffic extend approximately six miles between Berowra and the Hawkesbury River and approximately ten miles north of the river to Calga. The Department is currently constructing a bridge on the Hawkesbury River to link these two sections of the Expressway. Total cost of the project to 30 June 1972 was \$32 million. Toll collections during the year ended 30 June 1972 amounted to \$2,563,562.

### Victoria

With the object of improving the main roads of the State, the Country Roads Board was established by legislation passed in 1912. The principal duties of the Board are to determine which roads should be declared in the various classifications; to supervise the construction, reconstruction and maintenance of these roads; to inquire into the State's resources in road materials and the most effective methods of road construction and maintenance; and to recommend deviations in existing roads or the construction of new roads in order to facilitate communications or to improve the conditions of traffic.

The funds of the Country Roads Board are derived principally from motor registration fees, two-thirds of additional registration fees (charged on initial registration or transfer), a proportion of drivers' licence fees, payments by the Commonwealth Government under the Commonwealth Aid Roads Acts, roads charges under the Commercial Goods Vehicles Act, repayments by municipalities and, since 1965, a share of the addition to registration fees paid to the Roads (Special Projects) Fund and a grant under the Public Works Loan Application Act. In addition, loans have been authorised from time to time under the Country Roads Acts for permanent works on main and developmental roads, State highways, tourists' roads and forest roads, while the State Government has provided, free of repayment, loan moneys for restoration of flood and bush fire damage. Finance for the elimination of level crossings and for improved approaches, signs, lighting and other work to reduce danger at level crossings is derived mainly from the one third of additional registration fees paid into the Level Crossings Fund, maintained by the Board.

### COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS 1967-68 TO 1971-72

(\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>RECEIPTS</b>					
Motor Car Act—registration and licence fees (less cost of collection) . . . . .	26,805	28,889	30,868	32,895	34,296
Municipalities' payments . . . . .	1,845	1,931	1,904	2,018	2,190
Commonwealth Aid Roads Acts . . . . .	30,895	32,723	38,160	41,425	45,300
Roads (Special Projects) Fund . . . . .	2,652	3,055	3,533	7,761	6,721
Road charges, Commercial Goods Vehicles Act . . . . .	7,248	7,842	8,555	8,903	9,136
Loans from State Government . . . . .	987	3,389	900	388	400
Grants from State Government . . . . .	700	784	849	783	983
Other . . . . .	380	520	498	543	713
<b>Total . . . . .</b>	<b>71,513</b>	<b>79,132</b>	<b>85,267</b>	<b>94,715</b>	<b>99,739</b>

**COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS**  
**1967-68 TO 1971-72—continued**  
 (\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>PAYMENTS</b>					
Construction and maintenance of roads and bridges—					
State highways. . . . .	19,003	18,349	22,078	20,465	22,113
Main roads . . . . .	16,769	16,940	17,783	19,373	20,372
Freeways . . . . .	7,969	11,682	13,439	18,869	18,345
Tourist roads . . . . .	2,857	2,793	3,112	2,665	2,284
Forest roads . . . . .	658	678	798	902	858
Unclassified roads . . . . .	13,739	14,248	16,356	17,217	16,846
Other . . . . .	82	86	112	69	120
Plant purchase . . . . .	1,234	1,583	1,818	1,956	2,060
Buildings, workshops, etc. . . . .	746	611	618	599	331
Interest, debt redemption, etc. . . . .	2,190	2,306	2,443	2,504	2,584
Statutory payment to—					
Tourist Fund . . . . .	517	536	578	617	658
Transport Regulation Board. . . . .	404	435	471	513	534
Administration and other . . . . .	6,274	7,205	7,509	10,089	12,579
<b>Total . . . . .</b>	<b>72,443</b>	<b>77,452</b>	<b>87,115</b>	<b>95,838</b>	<b>99,685</b>

The Melbourne and Metropolitan Board of Works bears the responsibility for carrying-out planning scheme proposals relating to metropolitan highways and bridges, and is now carrying out a program of urgent highway works throughout the metropolitan area of Melbourne. The extension of the South-Eastern Freeway from Burnley to Tooronga, the Tullamarine Freeway to serve the new Tullamarine airport and the St. Kilda Road Underpass connecting Alexandra Avenue and Sturt Street have been completed. The Eastern Freeway from Collingwood to Bulleen is now under construction. Widening of High Street, St. Kilda, is in progress. Expenditure on road projects up to 30 June 1972 was \$76.1 million. Of this amount, \$26.1 million was financed from the proceeds of the Board's Metropolitan Improvement Rate, \$45.5 million was contributed by the Treasurer of Victoria from the Roads (Special Projects) Fund and \$4.5 million from the Commonwealth Aid Roads Account during 1971-72.

The Lower Yarra Crossing Authority was incorporated in October 1965 as a company limited by guarantee and given powers under the *Lower Yarra Crossing Authority Act 1965* to construct, operate and maintain a toll crossing over the lower reaches of the River Yarra.

### Queensland

The Department of Main Roads was constituted in February 1951 with the Commissioner of Main Roads as its permanent head. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main developmental, and secondary roads; and the responsibility for building and maintaining these declared roads is largely that of the Commissioner. Roads of purely local importance are constructed and maintained by local authorities. In many cases construction is financed by the State Government by means of Treasury loans. Other roads may be built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.

The funds of the Department of Main Roads are obtained chiefly from motor vehicle registration and collections, fees, etc., under the Transport Acts, contributions under the Commonwealth Aid Roads Acts, and loans, grants and advances from the State Government. The total receipts and payments during each of the years 1967-68 to 1971-72 are shown in the following table.



**DEPARTMENT OF MAIN ROADS, QUEENSLAND: RECEIPTS AND PAYMENTS**  
**1967-68 TO 1971-72**  
(\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>RECEIPTS</b>					
Motor vehicle registration, Transport Acts collections, fees, etc. . . . .	20,664	22,048	23,454	25,000	26,886
Loans from State Government . . . .	1,717	2,330	400	50	500
Grants from State Government . . . .	120	746	550	378	183
Roads (Contribution to Maintenance) Act . . . . .	3,918	4,297	4,754	4,689	4,862
Commonwealth Aid Roads and Works Act . . . . .	33,075	35,296	40,021	47,285	55,298
Maintenance repayments—local authorities . . . . .	1,400	1,471	1,515	1,116	1,137
Hire, rent, sales of plant, etc. . . . .	5,669	5,853	6,465	6,074	6,517
Other . . . . .	802	649	601	773	750
<b>Total . . . . .</b>	<b>67,366</b>	<b>72,689</b>	<b>77,761</b>	<b>85,366</b>	<b>96,132</b>
<b>PAYMENTS</b>					
Permanent road works and surveys(a) . . . . .	44,899	46,799	53,035	56,802	62,942
Maintenance of roads . . . . .	9,095	8,929	10,150	10,911	13,189
Plant, machinery, buildings, etc. (including plant maintenance) . . . . .	3,656	4,060	4,496	3,348	4,797
Loans—					
Interest . . . . .	338	276	236	59	—108
Redemption . . . . .	954	934	925	895	847
Administration and other . . . . .	9,497	10,194	11,697	12,870	14,947
<b>Total . . . . .</b>	<b>68,439</b>	<b>71,193</b>	<b>80,538</b>	<b>84,883</b>	<b>96,614</b>

(a) Includes grants to local authorities for road purposes.

### South Australia

The Highways Department is administered by the Commissioner of Highways, who is empowered, subject to the approval of the Minister of Roads and Transport, to undertake the construction, maintenance and protection of the principal roads of the State, allocate grants to councils for road-works and supervise the expenditure of these grants, and assist Councils to purchase road-making plant and to defray the cost of road-works. In addition, the Commissioner advises Councils on technical questions concerning the construction, maintenance or repair of roads. Funds of the Department are derived mainly from the Highways Fund, into which are paid the proceeds from motor vehicle registration and drivers' licences (less cost of collection) appropriations from loan funds, repayments of advances made to Councils, and contributions by the Municipal Tramways Trust, and from contributions under the Commonwealth Aid Roads Acts.

The following table shows particulars of receipts and payments, during the years 1967-68 to 1971-72, of funds controlled by the Highways Department.

**HIGHWAYS DEPARTMENT, SOUTH AUSTRALIA**  
**RECEIPTS AND PAYMENTS, 1967-68 TO 1971-72**  
 (\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>RECEIPTS</b>					
Motor vehicle registration, licences, fees . . . . .	11,858	12,536	13,250	14,212	18,000
Commonwealth Aid Roads Acts . . . . .	18,384	19,433	21,000	23,500	25,500
Other(a) . . . . .	3,693	3,799	5,161	4,022	4,088
<b>Total . . . . .</b>	<b>33,934</b>	<b>35,767</b>	<b>39,412</b>	<b>41,733</b>	<b>47,589</b>
<b>PAYMENTS</b>					
Construction and reconstruction of roads and bridges(b) . . . . .	20,799	23,837	30,200	27,056	31,699
Maintenance(a)(b) . . . . .	7,128	8,211	10,271	11,575	13,303
Recoups to Consolidated Revenue Fund—interest, debt redemption and exchange . . . . .	518	522	544	556	580
Advances to local and semi-government authorities . . . . .	1,386	1,253	402	251	305
Repayments to Revenue under Section 31(a), Highways Act . . . . .	240	..	..	..	..
Stores, plant, machinery, suspense accounts, etc.(c) . . . . .	2,866	—105	581	859	3,816
<b>Total . . . . .</b>	<b>32,936</b>	<b>33,718</b>	<b>41,998</b>	<b>40,298</b>	<b>49,703</b>

(a) Includes reimbursement works for Commonwealth Government. (b) Includes administration expenses.  
 (c) Represents gross repayments less recoveries by charges to works on account of depreciation and materials used.

### Western Australia

Work connected with road construction and maintenance and associated projects in Western Australia is undertaken by the State Government, through the Main Roads Department, and by local government authorities throughout the State. The Department operates under the *Main Roads Act*, 1930-1972, and is administered by a Commissioner of Main Roads responsible to the Minister for Works. The Act makes provision for the construction and maintenance of public roads in the categories of main roads, controlled-access roads and developmental roads. An additional category, that of important secondary roads, is used by the Department in determining its works program. Within its own district each local government authority is responsible for the provision and upkeep of roads other than those provided by the Main Roads Department. In addition, the local authority is required by the Main Roads Act to maintain any developmental road situated in its district.

The funds of the Main Roads Department are derived principally from allocations made under the *Commonwealth Aid Roads Act* 1969 under which Western Australia has been allotted grants totalling \$200,400,000 for the five-year period commencing 1 July 1969. In the seven-year period to 30 June 1974 grants totalling a maximum of \$9,500,000 are to be received from the Commonwealth for the improvement of roads used for the transport of beef cattle in the Kimberley District. Other sources of income include a portion of vehicle licence fees collected by local government authorities and the Commissioner of Police, overload permit fees and an allocation from drivers' licence fees. Further moneys for expenditure on road maintenance are available under the *Road Maintenance (Contribution) Act*, 1965-1972 administered by the Commissioner of Transport. Since 1 July 1969 the Main Roads Department, through changes to legislation, has administered funds not previously included in receipt and payments of the Department. Receipts and payments for the years 1967-68 to 1971-72 are shown in the following table.

**MAIN ROADS DEPARTMENT, WESTERN AUSTRALIA: RECEIPTS AND  
PAYMENTS, 1967-68 TO 1971-72**

(\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>RECEIPTS</b>					
Motor vehicle registration, licence fees, etc.—					
Police Department . . . . .	3,868	4,435	7,958	8,881	9,351
Local Authorities . . . . .	..	..	3,367	4,440	4,493
Commonwealth Aid Roads Acts . . . .	24,307	25,148	32,940	36,270	39,250
Commonwealth Aid Roads Acts —Matching grants . . . . .	1,202	2,040	..	..	..
State Grants (Beef Cattle Roads) Act .	1,400	1,451	1,168	1,000	1,600
Road Maintenance (Contribution) Act .	3,100	3,086	3,557	4,131	3,879
Recoups from other authorities . . . .	1,469	2,488	2,433	2,416	2,293
Other . . . . .	272	299	307	420	870
<b>Total . . . . .</b>	<b>35,618</b>	<b>38,946</b>	<b>51,730</b>	<b>57,558</b>	<b>61,737</b>
<b>PAYMENTS</b>					
Construction and reconstruction of roads and bridges(a) . . . . .	24,846	27,456	28,921	30,536	41,775
Maintenance of roads and bridges(a) .	3,294	4,452	4,820	5,815	6,612
Recoups to local authorities(b) . . . .	4,307	..	..	..	..
Grants to local authorities . . . . .	..	..	10,997	13,315	12,435
Transfer to State Consolidated Revenue .	258	258	267	281	280
Plant, machinery, etc. . . . .	2,046	516	950	1,617	2,785
Other(a) . . . . .	1,642	3,760	3,809	5,053	2,805
<b>Total . . . . .</b>	<b>36,393</b>	<b>36,442</b>	<b>49,764</b>	<b>56,616</b>	<b>66,693</b>

(a) Includes administration and expenditure on hire and maintenance of road construction plant, etc., and on purchase of materials. (b) Consists of payments to local authorities for work carried out on behalf of the Main Roads Department. From 1968-69 these payments have been included in 'Construction and reconstruction of roads and bridges' and 'Maintenance of roads and bridges'.

### Tasmania

Under the *Roads and Jetties Act 1935*, the control of the construction and maintenance of roads and certain road making plant was vested in the Minister for Lands and Works. Works authorised by the Minister in respect of roads classified as State highways, main roads, secondary roads and tourist and developmental roads are constructed by the Department of Public Works and financed from the State Highways Trust Fund, into which are paid Commonwealth Aid Roads grants, motor vehicle taxes and public vehicle fees. Loan funds are also authorised by Parliament for road purposes. Municipal councils contribute towards the cost of maintaining main and secondary roads in the classified system. The maintenance of roads not included in the classified system is the responsibility of municipal councils, but they are assisted with grants made available under the Commonwealth Aid Roads Act for expenditure on Rural Roads.

The table following shows particulars of receipts and payments for the years 1967-68 to 1971-72 (municipal council receipts from rates and loans for road purposes are excluded).



**ROAD FUNDS; TASMANIA: RECEIPTS AND PAYMENTS 1967-68 TO 1971-72**  
(\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>RECEIPTS</b>					
Motor vehicle taxation, registration, licences, fees, fines, etc. . . . .	4,396	4,587	4,827	5,033	5,758
Commonwealth Aid Roads Acts . . . . .	8,000	8,500	9,100	10,230	10,820
State Loan Fund . . . . .	1,188	739	1,100	1,020	930
Contributions by Local Authorities . . . . .	18	17	18	17	17
Other . . . . .	438	102	128	93	307
<b>Total . . . . .</b>	<b>14,040</b>	<b>13,945</b>	<b>15,173</b>	<b>16,393</b>	<b>17,831</b>
<b>PAYMENTS</b>					
Construction and reconstruction of roads and bridges . . . . .	10,848	10,180	11,322	12,320	12,960
Maintenance of roads and bridges . . . . .	3,159	3,263	3,662	4,297	4,475
Planning and research . . . . .	..	..	120	185	189
<b>Total . . . . .</b>	<b>14,007</b>	<b>13,442</b>	<b>15,105</b>	<b>16,802</b>	<b>17,624</b>

### Water supply, sewerage and drainage

The information in this section relates primarily to the metropolitan areas and provincial cities and towns. For information on water supply and irrigation in rural areas *see* Chapter 23, Water Conservation and Irrigation.

#### New South Wales

The two largest domestic water supply and sewerage systems are controlled by statutory boards each consisting of a president and a vice-president appointed by the State Government, and five members elected by local councils. These are (a) the Metropolitan Water, Sewerage and Drainage Board, which administers the systems in the County of Cumberland, i.e. in Sydney and in the surrounding districts, and, in addition, has jurisdiction over territory extending along the South Coast beyond Wollongong to Lake Illawarra, Shellharbour and Kiama, and (b) the Hunter District Water Board serving the Newcastle-Maitland-Cessnock areas. At Broken Hill and Cobar similar boards include representatives of the mining companies. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by county, municipal or shire councils.

*Metropolitan and Hunter District water supply.* The storage reservoirs of the *metropolitan water supply system* with a combined available capacity of 577,112 million gallons, drain catchment areas of 3,890 square miles (including Warragamba, 3,480 square miles, Upper Nepean, 347 square miles, and Woronora, 29 square miles). The development of a water supply system on the Warragamba River was completed with the official opening of the Warragamba Dam in October 1960. This dam, constructed in concrete, has a storage capacity of 452,505 million gallons. Its safe net draught is estimated to be 274 million gallons a day. At 30 June 1972 there were 190 service reservoirs in use with a combined capacity of 839 million gallons. Fluoridation of the metropolitan water supply commenced in April 1968.

The following table shows, for the Metropolitan system, the number of properties, the estimated population supplied, and other details.

**METROPOLITAN WATER SUPPLY(a), NEW SOUTH WALES: SERVICES, 1967-68 TO 1971-72**

Year	Improved properties for which water mains available	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of mains	Number of meters
					Per property	Per head of estimated population		
		'000	mil. gal	mil. gal	gallons	gallons	miles	
1967-68	756,063	2,816	270	98,981	357	96	8,325	532,859
1968-69	775,548	2,885	302	110,347	389	106	8,534	550,017
1969-70	795,918	2,968	285	104,017	358	97	8,805	583,818
1970-71	817,655	3,042	293	106,860	358	97	8,973	608,851
1971-72	839,984	3,040	295	107,838	351	97	9,195	634,211

(a) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities, and parts of Colo and Wollondilly Shires.

The water supply of the *Hunter District system* is drawn principally from three sources; the Chichester Reservoir, with a storage capacity of about 3,742 million gallons and draining a catchment of 76 square miles, the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens, and the Grahamstown Water Supply Scheme which is still being developed. Another source of supply is provided by the Nelson Bay-Anna Bay Scheme. Service reservoirs and tanks distributed throughout the water supply district have a total storage capacity of 137 million gallons.

*Metropolitan and Hunter District sewerage and drainage system.* The metropolitan sewerage and drainage system serving Sydney and suburbs comprises 4 major sewerage systems and 7 minor systems, consisting of 6 outfalls discharging directly into the Pacific Ocean and 5 treatment works. There are also 8 centres outside the metropolitan area of which 5 (Camden, Campbelltown, St Mary's, Richmond and Warragamba township) are served by local treatment works and 3 (Bellambi, Port Kembla and Wollongong) discharge directly into the Pacific Ocean. Stormwater drainage channels under the control of the Metropolitan Water, Sewerage and Drainage Board at 30 June 1972 were 192 miles long.

The following table gives details of sewerage services and stormwater drains of the Metropolitan system.

**METROPOLITAN SEWERAGE AND DRAINAGE(a)  
NEW SOUTH WALES: SERVICES, 1968 TO 1972**

30 June—			Improved properties for which sewerage available	Estimated population served	Length of sewers	Length of stormwater channels
				'000	miles	miles
1968	.	.	574,847	2,135	6,166	184
1969	.	.	602,312	2,235	6,504	186
1970	.	.	637,258	2,374	6,804	190
1971	.	.	659,035	2,477	7,109	191
1972	.	.	696,342	2,531	7,435	192

(a) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities, and parts of Colo and Wollondilly Shires.

The main sewerage system of the *Hunter District* serves the City of Newcastle and discharges into the Pacific Ocean at Burwood Beach. There are also local treatment works at Maitland, Cessnock and some of the outlying districts.

*Metropolitan system finances* The following table shows the debt, revenue and expenditure of the Metropolitan Water, Sewerage and Drainage Board for each of the services of water supply, sewerage and drainage during 1971-72, and for the three services combined for the years 1967-68 to 1971-72.

**METROPOLITAN(a) WATER SUPPLY, SEWERAGE AND DRAINAGE**  
**NEW SOUTH WALES: FINANCES, 1967-68 TO 1971-72**  
 (\$'000)

Year	Capital debt at 30 June	Revenue	Expenditure			Total	Surplus
			Working expenses (b)	Interest and exchange	Debt redem- ption		
1971-72—							
Water . . .	355,031	59,159	34,190	18,188	6,779	59,157	2
Sewerage . . .	345,258	57,385	31,664	18,673	7,041	57,378	7
Drainage . . .	15,689	3,307	2,229	874	198	3,301	6
<b>Total—</b>							
1971-72 . . .	715,978	119,851	68,083	37,736	14,017	119,836	14
1970-71 . . .	654,420	97,694	52,289	33,259	12,135	97,683	11
1969-70 . . .	627,475	88,343	47,112	30,213	11,004	88,328	15
1968-69 . . .	590,869	80,206	41,865	28,216	10,105	80,185	21
1967-68 . . .	550,793	68,917	31,765	26,389	10,754	68,908	9

(a) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities, and parts of Colo and Wollondilly Shires. (b) Includes provision for renewals, long service leave, etc.

*Local government country water supply and sewerage systems.* At 31 December 1970, country water supply services were conducted or under construction by 49 municipalities, 95 shires and 6 county councils, and country sewerage services by 54 municipalities and 75 shires. The capital indebtedness of these schemes was \$140,931,000 at 31 December 1970. Debt of the municipalities amounted to \$59,487,000, shires to \$64,436,000 and county councils to \$17,008,000. Government advances amounting to \$699,000 are included in these figures. Aggregate income and expenditure amounted to \$28,333,000 and \$21,416,000 respectively, in 1970.

*Other country water supply and sewerage systems.* The water supply and sewerage services for Broken Hill are operated by a statutory board, the Broken Hill Water Board. Its capital indebtedness at 31 December 1971 was \$5,133,000. In 1971, income (excluding subsidies, State Government \$246,000 and mining companies \$689,000) amounted to \$808,000 and expenditure (excluding debt redemption \$335,000) amounted to \$1,396,000. The Cobar Water Board was constituted in February 1964. At 31 December 1971 its capital indebtedness was \$2,134,000. The following country water supply systems—South-West Tablelands, Junee, and Fish River—are administered by the Department of Public Works. These supply water in bulk to municipalities and shires, the Electricity Commission of New South Wales, and other large consumers. Only a small quantity is sold direct to private consumers. The capital indebtedness of these systems was \$15,049,000 at 31 December 1971. The Mulwala Water Supply and Sewerage Service was constructed as an urgent war-time work for the Commonwealth, and the Bethungra Water Supply System is administered by the Department of Public Works in conjunction with the Junee supply.

## Victoria

*Melbourne and Metropolitan Board of Works.* The Board consists of a Chairman and fifty-three Commissioners elected to represent the municipalities which lie wholly or partly within the metropolitan area. The principal functions of the Board are: to control and manage the metropolitan water supply system; to provide the metropolitan area with an efficient main and general sewerage system; to deal with main drains and main drainage works; to control and manage the rivers, creeks and watercourses within the metropolitan area; and to carry out the functions of a permanent planning authority.

*Metropolitan water supply.* There are 6 storage reservoirs serving the metropolitan area—Yan Yean, 7,233 million gallons; Maroondah, 6,289 million gallons; O'Shannassy, 930 million gallons; Silvan, 8,853 million gallons; Upper Yarra, 45,400 million gallons; and Greenvale, 6,048 million gallons; total 74,753 million gallons. Service reservoirs number 57, with a total capacity of 409 million gallons. The following table shows particulars of Melbourne metropolitan water supply services for the years 1967-68 to 1971-72.



## MELBOURNE WATER SUPPLY: SERVICES, 1967-68 TO 1971-72

Year	Number of houses supplied	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of aqueducts, etc., mains and reticulation	Number of meters
					Per house	Per head of estimated population		
		'000	mil. gal.	mil. gal	gallons	gallons	miles	
1967-68	642,039	2,170	139.0	50,876	216	64.1	6,791	577,713
1968-69	658,944	2,227	173.4	63,288	263	77.9	7,034	595,560
1969-70	676,111	2,285	183.7	67,063	272	80.4	7,176	612,074
1970-71	698,024	2,359	200.4	73,141	287	84.9	7,337	630,020
1971-72	724,071	2,447	199.2	72,912	275	81.4	7,464	644,904

*Metropolitan sewerage and drainage.* Particulars of sewerage and drainage services for 1967-68 to 1971-72 are shown below.

## MELBOURNE SEWERAGE AND DRAINAGE: SERVICES, 1967-68 TO 1971-72

Year	Number of houses for which sewers are provided	Estimated population for which sewers are provided	Average daily pumping	Total sewage pumped for the year	Average daily pumping		Length of sewers, etc.	Length of main drains
					Per house	Per head of estimated population		
		'000	mil. gal	mil. gal	gallons	gallons	miles	miles
1967-68	509,185	1,685	86.1	31,514	169.1	51.1	4,739	240
1968-69	528,983	1,741	96.7	35,300	182.8	55.5	4,906	250
1969-70	543,870	1,786	109.5	39,972	201.3	61.3	5,073	255
1970-71	559,000	1,827	111.5	40,695	199.5	61.0	5,213	260
1971-72	575,221	1,885	115.8	42,399	201.3	61.4	5,282	265

The metropolitan sewerage system consists of the main system (serving an area of 123,536 acres) and 7 subsidiary systems—the Braeside system (serving an area of 6,849 acres), the Kew system (serving an area of 113 acres), the Maribyrnong system (serving an area of 182 acres), the Lower Plenty system (serving an area of 2,180 acres), the Heatherton system (serving an area of 2,049 acres), the Altona system (serving an area of 369 acres) and the Chelsea system (serving an area of 670 acres). The Board of Works Farm, 26,809 acres in extent and situated about twenty-four miles south west of Melbourne beyond the township Werribee, serves to purify and dispose of approximately ninety-five per cent of the sewerage flow of the metropolis before its discharge into Port Phillip Bay.

*Melbourne and Metropolitan Board of Works' finances.* The following table provides for the year 1971-72 a summary of the financial operations of the water supply, sewerage and drainage services conducted by the Melbourne and Metropolitan Board of Works, and of the combined services for the years 1967-68 to 1971-72. The financial operations of the Board as the Authority responsible for metropolitan highways and bridges are referred to on page 619.

**MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES**  
**1967-68 TO 1971-72**  
 (\$'000)

<i>Service, etc.</i>		<i>Capital cost of works and buildings at 30 June(a)</i>	<i>Revenue</i>	<i>Expenditure</i>				<i>Total</i>	<i>Surplus (+) or deficit (-)</i>
				<i>Working expenses</i>	<i>Works</i>	<i>Interest and exchange</i>	<i>Debt redemption</i>		
Water	.	247,138	26,934	9,427	1,400	12,290	..	23,117	+ 3,817
Sewerage	.	330,443	34,666	9,054	2,600	16,617	..	28,271	+ 6,395
Drainage	.	41,657	6,157	2,248	1,000	1,793	..	5,041	+ 1,116
General(b)	.	26,816	..	5,318	..	..	4,517	9,835	- 9,835
<b>Total</b>	<b>1971-72</b>	<b>646,054</b>	<b>67,757</b>	<b>26,047</b>	<b>5,000</b>	<b>30,700</b>	<b>4,517</b>	<b>66,264</b>	<b>+ 1,493</b>
	1970-71	562,980	57,364	22,542	3,550	26,700	3,854	56,645	+ 719
	1969-70	505,957	49,097	18,685	3,600	23,668	3,443	49,396	- 299
	1968-69	449,333	41,981	15,427	2,334	21,184	3,239	42,183	- 202
	1967-68	411,221	35,587	13,213	1,776	19,258	2,685	36,932	- 1,345

(a) Total loan indebtedness—1971-72, \$569,255.

(b) Statutory and general expenditure not distributed over services.

*State Rivers and Water Supply Commission.* Water supply and conservation throughout Victoria, (except for the area controlled by the Melbourne and Metropolitan Board of Works) is under the jurisdiction of the State Rivers and Water Supply Commission. The events leading to the establishment of the Commission, and its various works are described in the chapter, Water Conservation and Irrigation.

### Queensland

The *Brisbane City Council* operates the water supply and sewerage systems of the City of Brisbane and also supplies, in bulk, the whole of the water used by the City of Ipswich and a portion of that used by the City of Redcliffe and Albert Shire Council. Redcliffe supplements its supply from that of the Pine Rivers Shire Council, while Albert also draws on its own reservoirs. The total number of service reservoirs for Brisbane Water Supply is 30, with a capacity of 110.9 million gallons. The Somerset reservoir is a dual purpose project with a designed total holding capacity of 200,000 million gallons, 67,500 million gallons to be for water storage and 132,500 million gallons for flood mitigation. The following table is a summary of operations of the complete Brisbane City Council system (Brisbane, Ipswich, and portion of Redcliffe and Albert Shires) for the years 1967-68 to 1971-72.

**BRISBANE WATER SUPPLY(a): SERVICES, 1967-68 TO 1971-72**

<i>Year</i>		<i>Services connected</i>	<i>Estimated population supplied</i>	<i>Average daily consumption</i>	<i>Total consumption for the year</i>	<i>Average daily consumption</i>		<i>Length of trunk and reticulation mains</i>
						<i>Per service</i>	<i>Per head of estimated population</i>	
				mil. gal	mil. gal	gallons	gallons	miles
1967-68	.	207,657	759,434	76.7	27,984	369	101.0	2,823
1968-69	.	213,445	772,356	85.4	31,170	400	110.6	2,834
1969-70	.	218,798	799,276	81.9	29,888	374	102.4	2,972
1970-71	.	223,911	807,168	85.5	31,221	382	106.0	3,062
1971-72	.	235,343	828,088	91.8	33,603	390	110.9	3,279

(a) Includes Ipswich and a portion of Redcliffe and Albert Shires.

The sewerage treatment works of the *Brisbane sewerage scheme* is situated at Luggage Point at the entrance to the Brisbane River. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1967-68 to 1971-72.

BRISBANE SEWERAGE: SERVICES, 1967-68 TO 1971-72

Year	Premises connected	Estimated population served	Total sewage pumped for the year	Length of main, branch, reticulation, etc., sewers
			mil. gal	miles
1967-68 . .	109,364	404,647	8,358	1,607
1968-69 . .	122,690	453,953	8,619	1,824
1969-70 . .	143,245	530,007	9,313	2,048
1970-71 . .	152,803	565,371	9,333	2,273
1971-72 . .	167,585	596,603	8,940	2,506

*Brisbane City Council water supply and sewerage systems—finances.* The following table shows particulars of the finances of the water supply and sewerage undertakings of the Brisbane City Council for the years 1967-68 to 1971-72.

BRISBANE WATER SUPPLY AND SEWERAGE: FINANCES, 1967-68 TO 1971-72  
(\$'000)

Service and year	Gross capital cost to 30 June	Revenue	Expenditure		Total(a)	Surplus (+) or deficit (-)	
			Working expenses	Interest, redemption etc., charges			
Water supply—							
1967-68 . . .	64,626	9,808	3,661	2,760	9,132	+	676
1968-69 . . .	69,719	10,214	4,057	2,835	9,334	+	880
1969-70 . . .	77,255	10,697	4,134	2,995	10,145	+	552
1970-71 . . .	85,157	11,769	4,687	3,246	11,816	-	47
1971-72 . . .	95,135	13,604	5,436	3,081	10,748	+	2,856
Sewerage—							
1967-68 . . .	69,264	7,237	1,105	2,225	6,619	+	618
1968-69 . . .	72,123	8,404	1,250	2,443	7,696	+	708
1969-70 . . .	74,489	8,848	1,481	2,677	7,881	+	967
1970-71 . . .	77,802	10,524	1,961	3,064	9,261	+	1,263
1971-72 . . .	77,876	11,171	2,531	2,697	6,979	+	4,192

(a) Total, including other expenditure.

*Other areas.* At 30 June 1971, of the 130 local authorities in addition to the City of Brisbane, 126 had water supply schemes and 75 operated sewerage systems. The receipts (other than loan and loan subsidy) of water undertakings controlled by the cities and towns referred to above amounted to \$13,089,000 in 1970-71. Expenditure amounted to \$12,983,000, including \$5,400,000 for debt charges. In addition, expenditure from loans and loan subsidy amounted to \$10,186,000. Finances of sewerage undertakings are incorporated with cleansing and sanitary services and are not available separately.

### South Australia

The water supply and sewerage systems in this State were constructed mainly, and are maintained by the Engineering and Water Supply Department, under the control of the Minister of Works. Works controlled by the Department are the Adelaide, Barossa, Beetaloo, Bundaleer, Moorook, Tod River, Warren, Yorke Peninsula, and other country water districts systems, the Morgan-Whyalla water supply system, the metropolitan and country sewerage systems, the Metropolitan Flood Waters Scheme, and works on the River Murray constructed under the River Murray Waters Agreement. Several water supply schemes on the Murray River are administered by the Department of Lands in conjunction with irrigation works, and supplies to Woomera and Leigh Creek coalfield are controlled by the operating authorities.



*Adelaide waterworks.* At 30 June 1972 the Adelaide waterworks supplied districts covering 385 square miles of the metropolis and extending to near country areas. The capacity of the principal reservoirs was 41,438 million gallons and there were 3,795 miles of metropolitan mains. The Mannum-Adelaide pipeline conveys water from the River Murray. Water is delivered to a terminal storage near Adelaide and thence to the metropolitan distribution system or alternatively it can be delivered into metropolitan reservoirs on the River Torrens or to reservoirs on the River Onkaparinga by further pumping. The pipeline also supplies various country areas along and extending from its route. A second River Murray pipeline extending from Murray Bridge to the River Onkaparinga is under construction.

**ADELAIDE WATERWORKS: FINANCES, 1967-68 TO 1971-72**  
(\\$'000)

Year	Invested capital at 30 June (a)	Revenue	Expenditure		Total	Surplus(+) or deficit(-)
			Working expenses (b)	Interest		
1967-68	108,936	10,267	6,746	4,730	11,476	- 1,209
1968-69	114,121	10,793	5,552	4,919	10,471	+ 322
1969-70	123,817	12,722	6,236	5,399	11,636	+ 1,086
1970-71	133,509	14,513	6,787	5,887	12,674	+ 1,839
1971-72	143,880	15,772	7,130	6,414	13,544	+ 2,229

(a) After deduction of depreciation. (b) Includes debt redemption.

*Adelaide metropolitan sewerage system.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg, Port Adelaide, Christies Beach, and Salisbury-Elizabeth areas of 207 square miles in all, includes treatment works at Glenelg, Port Adelaide, Bolivar, and Christies Beach. Financial and other particulars for 1967-68 to 1971-72 are shown hereunder.

**ADELAIDE METROPOLITAN SEWERAGE: SUMMARY, 1967-68 TO 1971-72**

Year	Length of sewers	Number of con- nections	Invested capital at 30 June(a)	Revenue	Expenditure		Total	Surplus
					Working expenses (b)	Interest		
	miles		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1967-68	2,125	227,489	74,808	7,156	3,375	2,822	6,197	959
1968-69	2,193	234,818	78,141	7,601	3,463	3,073	6,536	1,065
1969-70	2,276	244,239	84,080	8,644	3,716	3,601	7,317	1,327
1970-71	2,347	254,816	90,169	10,477	4,270	3,910	8,180	2,297
1971-72	2,415	265,755	96,431	11,977	4,909	4,500	9,409	2,568

(a) After deduction of depreciation. (b) Includes debt redemption.

*Country sewerage schemes.* Sewerage schemes are operating at Port Lincoln, Naracoorte, Mount Gambier, Millicent, Lobethal, Gumeracha, Nangwarry, Mount Burr, Myponga, Mannum, Whyalla and Angaston. At Port Lincoln and Mount Gambier the sewers discharge to ocean outfalls, and treatment works are used on the other systems. There are 331 miles of sewers and 19,222 connections in the country systems. Sewerage schemes for Port Pirie, Murray Bridge and Gawler are under construction and operating in part.

*Country water supply.* Water districts systems at 30 June 1972 comprised an area of 15,867,000 acres. Supply came from major reservoirs having a capacity of 20,439 million gallons, from minor reservoirs, from the River Murray, and from underground sources. Apart from local supplies, water from the River Murray is distributed over wide areas through the Mannum-Adelaide, Morgan-Whyalla, Swan Reach-Stockwell and Tailem Bend-Keith pipelines and branches of these pipelines. The principal areas of underground supplies are in the south-east of the State, where water from the Murray Basin can be had at moderate depths or from lakes, and from sand beds on Eyre Peninsula.

In the year 1971-72 supplies made to Mount Gambier, Naracoorte and other towns in the south-east amounted to 1,333 million gallons, and the Unley-Wanilla, Lincoln and Poldas Basins contributed 764 million gallons to the Tod River Water District.

*Morgan-Whyalla water supply scheme.* This scheme, which has 223 miles of main via Port Augusta and 176 miles of main via the Spencer Gulf undersea crossing, was officially opened on 31 March 1944, the capital invested to 30 June 1972 being \$38,000,000. Apart from supplying Whyalla, the mains have been used to allow expansion of reservoir supplies in the northern agricultural area of the State, and to meet new demands caused by industrial growth at Whyalla, Port Pirie and Port Augusta. During 1971-72 water used from the scheme amounted to 4,379 million gallons.

### Western Australia

The principal water supply systems of Western Australia are under the control of two State authorities, the Metropolitan Water Supply, Sewerage and Drainage Board and the Public Works Department. The area which constitutes the territory administered by the Board encompasses approximately 1,600 square miles and extends from Perth southward to Rockingham and Serpentine, northward to Mullaaloo, and eastward to Sawyers Valley and Kalamunda. The Public Works Department controls the Goldfields and Agricultural Water Supply and the Great Southern Towns Water Supply as well as 125 local water supplies (*see also* Chapter 23, Water Conservation and Irrigation). Four independent town schemes are controlled by local Water Boards in country areas, and individual water supplies serve railways, timber mill towns, isolated mines, pastoral properties, stock routes, and agricultural areas, mainly from dams, tanks, wells and bores.

*Metropolitan water supply, sewerage and drainage.* The sources of the metropolitan water supply are Serpentine Reservoir and Serpentine Pipehead Reservoir, Canning Reservoir, Churchman Brook Reservoir, Victoria Reservoir, Wungong Brook Diversion Weir and North Dandalup Pipehead Dam. The largest of these sources are the Serpentine Reservoir and the Canning Reservoir, which have a capacity of 39,000 million gallons and 20,550 million gallons respectively. Water from storages on the Darling Range is conveyed to service reservoirs to serve the City of Perth and the metropolitan area. A limited quantity of water is drawn from Mundaring Weir to serve sections of Greenmount, and to meet the peak demands of summer consumption supplies are supplemented from artesian bores, which can provide a daily maximum of 21 million gallons. The amount of bore water used is rarely more than 10 per cent of the metropolitan consumption and is usually considerably less.

The following table shows particulars of the *metropolitan water supply services* for 1967-68 to 1971-72.

**METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA: SERVICES  
1967-68 TO 1971-72**

Year	Number of services (a)	Average daily consumption	Total consumption for year	Average daily consumption per service (b)	Length of mains	Number of meters
		mil. gal	mil. gal	gallons	miles	
1967-68 . . .	173,068	68.2	24,958	403	2,923	152,603
1968-69 . . .	185,340	76.7	28,015	429	3,144	161,859
1969-70 . . .	193,359	87.2	31,820	458	3,317	171,346
1970-71 . . .	200,597	89.2	32,573	452	3,505	178,857
1971-72 . . .	210,465	93.4	34,099	455	3,687	187,313

(a) Figures relate to 30 June.

(b) Calculated from averages for the year.

Some particulars of the *metropolitan sewerage and main drainage services* for 1967-68 to 1971-72 are shown in the following table.

**METROPOLITAN SEWERAGE AND MAIN DRAINAGE  
WESTERN AUSTRALIA: SERVICES 1967-68 TO 1971-72**

Year	Services	Length of sewers	Length of main drains
		miles	miles
1967-68 . . . .	72,177	886	118
1968-69 . . . .	74,018	931	126
1969-70 . . . .	76,638	988	141
1970-71 . . . .	81,940	1,136	157
1971-72 . . . .	87,318	1,237	157

*Metropolitan Water Supply, Sewerage and Drainage Board—finances.* The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Board.

**METROPOLITAN WATER SUPPLY, SEWERAGE AND MAIN DRAINAGE  
WESTERN AUSTRALIA: FINANCES, 1967-68 TO 1971-72  
(\$'000)**

Service and year	Capital cost to 30 June	Revenue	Expenditure		Total	Surplus
			Working expenses	Interest and debt redemption		
<b>Water supply—</b>						
1967-68 . . . .	66,217	5,782	2,292	3,243	5,535	247
1968-69 . . . .	74,078	7,162	2,322	3,510	5,832	1,331
1969-70 . . . .	82,482	7,915	2,808	3,949	6,757	1,159
1970-71 . . . .	92,284	8,371	3,389	4,460	7,850	521
1971-72 . . . .	101,509	10,956	3,953	4,931	8,884	2,073
<b>Sewerage—</b>						
1967-68 . . . .	29,286	3,198	1,689	1,474	3,164	34
1968-69 . . . .	34,027	3,809	1,771	1,637	3,408	401
1969-70 . . . .	40,821	4,162	1,983	1,867	3,850	313
1970-71 . . . .	48,500	4,508	2,255	2,214	4,470	38
1971-72 . . . .	57,479	6,097	2,693	2,573	5,267	831
<b>Main drainage—</b>						
1967-68 . . . .	7,433	721	314	349	663	58
1968-69 . . . .	8,657	872	327	375	702	170
1969-70 . . . .	9,838	951	353	407	760	192
1970-71 . . . .	10,699	1,144	448	467	915	228
1971-72 . . . .	11,259	1,357	492	503	995	362

*Country water supplies.* Information relating to country water supplies is included in Chapter 23, Water Conservation and Irrigation.

### Tasmania

*Waterworks.* During the year 1971-72, water was supplied to over 104,000 properties which consumed approximately 15,900 million gallons.

In Tasmania, water supply was once the exclusive responsibility of the city and municipal councils. In recent years, two semi-government authorities have been set up to operate bulk supply schemes for distribution by the local government authorities in the Hobart and Launceston areas, and directly to some industrial consumers. The North Esk Regional Water Supply Scheme is operated by the Rivers and Water Supply Commission as a State concern, supplying bulk water to the municipalities of St Leonards, George Town, Lilydale, and portion of Westbury. This scheme supplies water to



industries situated near the Tamar River. Also vested in the Commission is the West Tamar Water Supply Scheme which serves the Municipality of Beaconsfield, and is operated by the Beaconsfield Council as the agent of the Commission. The over-all control of water supply in the greater Hobart area, comprising the municipalities of Hobart, Clarence, Glenorchy, and Kingborough, is vested in the Metropolitan Water Board, but the municipalities retain primary responsibility for reticulation. The Board has constructed a large pumping station at Bryn Estyn, near New Norfolk, which supplies bulk water from the Derwent River to the metropolitan area and has a pipeline capacity of 20 million gallons a day. In addition, the Board also controls the Southern Regional Water Supply Scheme with a pipeline capacity of 6.9 million gallons a day which supplies water to Hobart's eastern shore and nearby towns.

*Sewerage.* At the end of 1971-72 the number of tenements connected to sewerage services was about 83,000. Approximately 60 per cent of sewerage discharge is subject to treatment.

#### **Northern Territory**

Information relating to water supply in the Northern Territory may be found in Chapter 23, Water Conservation and Irrigation.

#### **Australian Capital Territory**

The water supply, sewerage and drainage systems in the Australian Capital Territory are under the control of the Commonwealth Department of Works. The sources of the water supply are: Cotter Dam (capacity 1,034 million gallons), Bendora Dam (2,360 million gallons) and Corin Dam (16,600 million gallons). Water is fed from Bendora Dam by gravity to 22 major reservoirs. The maximum daily supply is 57 million gallons. An alternative supply is available from 9 pumps at the Cotter Dam at a rate of 38 million gallons per day.

The total population served in the Australian Capital Territory, which during 1971-72 consumed 7,173 million gallons of water, was 158,417 (at 30 June 1972.) In addition, the Canberra water supply system supplied 454 million gallons of water to Queenbeyan, New South Wales. The total number of water meters at 30 June 1972 was 41,421 and the total length of water lines was 809 miles.

The sewerage system for Canberra suburbs has three treatment works: the Weston Creek works provide for 132,000 persons, the Fyshwick works provide for 20,000 persons and the Belconnen works provide for 25,000 persons. There were 816 miles of sewerage, and 9 miles of sewer rising mains (at 30 June 1972). There were also 813 miles of storm-water drains.

### **Harbour boards and trusts**

The number and net tonnage of vessels which entered the major ports in each State during the years 1970-71 and 1971-72 are shown in Chapter 12, Transport, Communication and Travel (*see* page 339). Particulars of overseas and interstate cargo discharged and shipped are shown on pages 339-43 of the same chapter.

#### **New South Wales**

*The Maritime Services Board of New South Wales* exercises general control over intra-state shipping, including the survey and certification of vessels, the licensing of harbour craft and the examination and issue of certificates to officers. It is responsible for the provision of pilotage services, lights, beacons, buoys and other port facilities, imposes and collects rates and charges on goods and vessels, and is vested with the general control and management of the navigable waters and ports within the State. At the ports of Sydney, Newcastle and Botany Bay the Board is also responsible for the provision of adequate wharfage and channels and carries out all construction, maintenance and dredging work. Since 1 February 1936 the State enactments on port charges, including the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act and the Sydney Harbour Trust Act, have been administered by the Maritime Services Board. The total revenue collections by the Maritime Services Board amounted to \$39,302,000 in 1971-72. This figure includes the revenue for the ports of Sydney, Newcastle and Botany Bay.

Financial details relating to these three ports are shown in the following table.

MARITIME SERVICES BOARD FUND: FINANCES OF THE PORTS OF SYDNEY  
NEWCASTLE AND BOTANY BAY, 1967-68 TO 1971-72

(\$'000)

Year	Revenue				Expenditure(a)			Surplus(+) or deficit(-)
	Wharfage and transhipment rates	Tonnage rates and berthing charges	Other charges	Total	Administration and maintenance	Interest, debt redemption, exchange, etc.	Total	
1967-68	12,664	2,024	5,645	20,333	10,830	9,451	20,280	+ 53
1968-69	13,580	2,085	7,294	22,959	12,150	10,716	22,866	+ 93
1969-70	14,854	2,271	7,875	25,000	12,816	12,120	24,937	+ 64
1970-71	15,105	2,150	13,042	30,297	15,885	14,642	30,527	- 229
1971-72	17,160	2,296	10,915	30,371	17,073	13,059	30,132	+ 239

(a) Excludes capital expenditure but includes transfers to the Renewals Fund Reserve Account (\$4,940,000 in 1967-68, \$5,800,000 in 1968-69, \$6,760,000 in 1969-70, \$9,140,000 in 1970-71, and \$6,600,000 in 1971-72).

*Port of Sydney.* The wharves are situated close to the business centre of the city, about 4 or 5 miles from the Heads. At 30 June 1972 there were 5 dolphin berths, 3,550 feet long, and 76 effective commercial cargo berths, with a total length of 36,792 feet, controlled by the Board. Accommodation for harbour craft amounts to 2,245 feet, while the length of other berths, including oil and private wharves, totals 11,791 feet. Depth of water at wharves is up to 43 feet. Special facilities for the storage and handling of products such as wheat, wool, coal, etc. are provided. Docking facilities are available for large vessels at the Captain Cook Graving Dock. Container facilities became available in March 1969 with the opening of the eastern section of the Balmain container terminals to cellular container vessels.

*Port of Newcastle.* Shipping at Newcastle is concerned primarily with the coal, iron and steel and other heavy industries located in the district. However, facilities are available for the shipment of wool, wheat and frozen meat, and a wharf is available for timber.

*Botany Bay.* The port is primarily a discharging centre for the oil refinery at Kurnell, near Sydney, and one jetty with a tanker berth each side of the jetty is available as well as three tanker offshore moorings with submarine pipelines.

*Port Kembla* is the port of the southern coalfields and for the major industrial areas in and about Wollongong.

*Other ports.* In addition to the port of Sydney, Newcastle, Port Kembla, and Botany Bay, the Board controls 29 outports along the coastline of 609 miles. The shipping trade of these outports is relatively small.

## Victoria

The *Port of Melbourne* comes under the control of the Melbourne Harbor Trust Commissioners, a financially independent statutory organisation, with a full-time chairman and five part-time commissioners.

The advanced methods of cargo handling which have developed with the advent of container, unit load, and roll-on roll-off vessels now entering the Port, have required, during the past 10 years an expenditure in excess of \$60 million on capital works, and the current capital value of the Port of Melbourne is more than \$103 million. The Port covers an area of 10.5 square miles and provides 12 miles of berthage, with 92 commercial berths.

The main container complex, Swanson Dock, has four berths. Constructed at a cost of \$20 million, and taking some 6 years to complete, this 90 acre complex handled 3.56 million tons of containerised cargo in 1972.

Currently, the Port of Melbourne has seven roll-on roll-off berths. The Webb Dock area, the Port's busiest roll-on roll-off complex, was originally a ferry berth (constructed in 1959) with a four acre back-up area, and has now been developed into a three berth complex, with a back-up area of 20 acres. During 1972 Webb Dock handled 2.36 million tons of cargo.

The depth of water (low water ordinary spring tide) from the main channels to the principal wharves is 31 to 37 feet.

The following table shows particulars of the financial operations of the Trust.

MELBOURNE HARBOR TRUST: FINANCES, 1968 TO 1972

(\$'000)

Year	Gross loan indebtedness at 31 December	Revenue		Expenditure				Total	Surplus (+) or Deficit (—)
		Wharfage and tonnage rates	Total	Operation, administration and maintenance	Interest, debt redemption, exchange, etc.	General reserve, depreciation, renewals and insurance account			
1968	36,029	8,357	13,573	6,972	2,381	4,002	13,355	+218	
1969	37,888	8,901	14,321	7,903	2,127	4,049	14,079	+242	
1970	40,690	9,475	15,047	8,512	2,869	3,419	14,800	+247	
1971	44,059	10,038	16,263	9,719	3,152	3,158	16,029	+233	
1972	45,644	9,398	15,478	10,569	2,506	2,867	15,942	—464	

The *Port of Geelong* operated by the Geelong Harbor Trust, has available 17 effective berths, plus 2 berths at the Commonwealth Explosives Pier, Point Wilson, owned and operated by the Commonwealth. Two modern dry bulk berths (Lascelles Wharf Nos 1 and 2 berths) became fully operational in 1970 and a roll-on/roll-off berth at Corio Quay came into operation in January 1971.

*Port of Portland.* Development projects currently in hand will within the next year or so, provide the port with facilities necessary to handle fully laden carriers up to 70,000 tons deadweight. In the first instance No. 1 berth and its approaches are being dredged from 36 feet to 40 feet low water and the bulk grain gallery extended to the outer limits of the K. S. Anderson wharf. Trade handled during 1971-72 rose by 9.5 per cent to an all time high of 922,294 tons; operating revenue showed a corresponding increase of 6.3 per cent to \$1,326,846.

### Queensland

The ports of Queensland generally are administered by harbour boards with members representing the cities, towns and districts served by the ports. Where no board is established, control is exercised by the Corporation of the Treasurer through the Department of Harbours and Marine.

Harbour Board ports are Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville.

Corporation of the Treasurer principal ports are Brisbane, Hay Point, Lucinda, Maryborough, Mourilyan, Thursday Island and Weipa.

*Brisbane*, the busiest port in the State, is a river port of world standard dredged to a sufficient depth to accommodate all classes of vessels on the Australian trade. The port, as well as providing wharves for containers, bulk grain fertiliser, freezer goods, petroleum products and general cargo also provides shipbuilding and ship repair facilities including a dry dock accommodating vessels up to 70,000 tons deadweight. Two refineries, situated at the mouth of the river can supply all ships' bunkering requirements.



The finances of Brisbane Harbour for the years 1967-68 to 1971-72 are shown in the following table.

**BRISBANE HARBOUR: FINANCES, 1967-68 TO 1971-72**  
(\\$'000)

Year	Loan indebtedness at 30 June	Receipts		Payments	
		Harbour dues	Total	Working expenses(a)	Total
1967-68 . . .	4,504	2,019	3,475	3,039	3,376
1968-69 . . .	4,890	2,333	3,622	3,156	3,483
1969-70 . . .	5,726	2,320	3,772	4,542	4,927
1970-71 . . .	5,576	2,685	3,788	3,556	4,004
1971-72 . . .	6,352	3,001	4,349	3,308	3,789

(a) Excludes interest and redemption included in total.

### South Australia

*Department of Marine and Harbors.* All South Australian harbours are controlled by the Department of Marine and Harbors, which is responsible to the Minister of Marine for the discharge of its duties and functions. The most important ports are the six deep-sea ports of Port Adelaide, Port Pirie, Wallaroo, Port Lincoln, Port Giles and Thevenard. In South Australia there are also eight privately-owned and operated ports. The principal of these are Whyalla, Ardrossan, Rapid Bay, and Proper Bay (Broken Hill Pty Co. Ltd), Port Augusta (Commonwealth Railways) and Port Stanvac (Petroleum Refineries (Aust.) Pty Ltd). Maximum depths of water (low water) at the wharves of the main ports range from 27 feet at Port Pirie to 35 feet at Port Adelaide. The following table shows the finances of the Department for 1967-68 to 1971-72.

**DEPARTMENT OF MARINE AND HARBORS, SOUTH AUSTRALIA: FINANCES**  
1967-68 TO 1971-72  
(\\$'000)

Year	Loan indebtedness at 30 June	Revenue	Expenditure from revenue			Surplus(+) or Deficit(-)
			Working expenses	Interest	Total	
1967-68 . . .	45,478	6,418	4,196	1,869	6,065	+352
1968-69 . . .	47,614	6,653	4,365	1,957	6,322	+331
1969-70 . . .	50,736	7,282	4,265	2,176	6,442	+840
1970-71 . . .	55,081	7,628	5,056	2,431	7,487	+141
1971-72 . . .	59,589	7,611	5,346	2,796	8,142	-530

### Western Australia

The *Port of Fremantle* is operated and controlled by the Fremantle Port Authority. The port covers an extensive water area of some 180 square miles and comprises an inner and an outer harbour. The inner harbour includes 20 deep-water land-backed berths, providing more than 550,000 square feet of covered storage space and 13,104 feet of wharf berth accommodation. All inner harbour berths are dredged to a low water depth of 36 feet. The outer harbour includes 3 main anchorages, Gage Roads, Owen Anchorage and Cockburn Sound. Deep-water jetties, including the oil refinery jetty in Cockburn Sound, are available in the outer harbour. Ocean-going deep draft ships enter the Sound by means of a channel dredged through Success and Parmelia Banks to a low water depth of 45 feet and a bottom width of 500 feet. In the outer harbour there are 3 tanker berths each with a low water depth of 44 feet at the Kwinana oil refinery, 2 berths at the nearby steelworks jetties with a low water depth of 38 feet, 2 berths at the alumina works jetty with a low water depth of 38 feet and 1 berth at the bulk cargo jetty with a low water depth of 44 feet. There is also a special berth for the handling of explosives. Total effective berth accommodation in the outer harbour is 6,110 feet. Gross earnings for 1971-72 amounted to \$10,969,782, working expenses to \$7,960,162, interest charges on loan capital \$1,302,733, and loan indebtedness totalled \$24,156,847.

The Ports of *Albany, Bunbury, Esperance, Geraldton* and *Port Hedland* are controlled by their respective Port Authorities.

*Other ports.* The following ports are controlled by the State Government Harbour and Light Department: Broome, Carnarvon, Derby, Onslow, Port Walcott, and Wyndham. Ports privately controlled comprise Yampi and Dampier, both operated by iron ore mining companies, and Exmouth, the port serving the communications installation at North West Cape. A private buoyed sea terminal is operated at Barrow Island for the shipment of crude oil, and private interests ship salt at Cape Cuvier, and salt and gypsum from Useless Loop in Shark Bay.

### Tasmania

Port services in Tasmania are under the control of eight port authorities: the Marine Boards of Hobart, Devonport, Burnie, Circular Head (Stanley), King Island (Currie), and Flinders Island (Whitemark); the Port of Launceston Authority and the Smithton Harbour Trust. The ports at Hobart, Launceston (Bell Bay), Burnie and Devonport are general cargo terminals for overseas shipping. Other ports catering primarily for overseas export of specialised cargoes include Port Latta (iron ore pellets), Triabunna (wood chips), and Port Huon (fruit).

#### AUTHORITIES CONTROLLING PORTS, TASMANIA: FINANCES 1967-68 TO 1971-72 (\$'000)

Authority	Loan indebtedness at 30 June (a)	Receipts (revenue account) total	Expenditure (revenue account)		Total (a)	New loans raised	Loan expenditure
			Works and services	Loan charges			
Hobart . . .	5,885	2,156	917	424	1,778	1,800	2,129
Launceston . . .	7,441	2,410	1,223	626	2,380	1,130	1,345
Devonport . . .	7,118	1,427	431	682	1,316	450	423
Burnie . . .	12,950	1,567	308	1,014	1,535	700	833
Circular Head . . .	998	86	11	62	81	500	522
King Island . . .	62	73	28	21	73	..	..
Flinders Island . . .	194	30	10	15	27	10	10
Smithton . . .	..	1	1	..	2	..	..
<b>Total 1971-72</b>	<b>34,648</b>	<b>7,752</b>	<b>2,928</b>	<b>2,844</b>	<b>7,194</b>	<b>4,590</b>	<b>5,261</b>
1970-71	31,057	7,133	2,618	2,535	6,366	4,471	5,042
1969-70	27,464	6,765	3,051	2,300	6,347	3,910	3,386
1968-69	24,376	6,274	2,817	2,011	6,253	2,837	4,574
1967-68	22,249	5,953	2,272	1,921	5,433	2,598	2,395

(a) Includes expenditure not specified in component items.

## CHAPTER 19

### EDUCATION, CULTURAL ACTIVITIES, AND RESEARCH

For the most recent statistics available on subjects dealt with in this chapter reference should be made to the series of mimeographed bulletins on social statistics issued by this Bureau. These bulletins comprise *Schools* (13.5), *University Statistics Parts 1, 2, 3* (13.7, 13.8, 13.9), *Colleges of Advanced Education* (13.10) and *Teacher Education* (13.12). The *Quarterly Summary of Australian Statistics* (1.3) contains summarised information on these subjects, and financial aspects are dealt with in the annual bulletins *Public Authority Finance—Commonwealth Authorities* (5.12), *Public Authority Finance* (5.33) *Public Authority Finance—State and Local Authorities* (5.43) and *Expenditure on Education* (5.44). The annual Reports of the respective State education departments provide detailed statistical and other information about particular States. The Commonwealth Department of Education issues publications on aspects of primary, secondary and tertiary education.

### EDUCATION

An account of the development of the Australian school system up to 1929 may be found in Year Book No. 22. In Year Book No. 40 a review of changes which occurred up to 1951 and of the practices then current was presented. The present situation is summarised in the early part of this chapter, in textual material provided by the Commonwealth Department of Education.

#### Pre-school education and child care

Pre-school centres were first established in the Australian States by voluntary organisations and a large number are still supported and supervised by them. The organisations include kindergarten unions, day nursery and creche associations, pre-school associations and denominational kindergartens. All now receive financial assistance from State governments but the amounts granted vary considerably from State to State. Other pre-schools are subsidised directly by States. In Tasmania the Education Department has accepted the responsibility for pre-school education. The development is towards incorporating pre-school education into primary schools rather than providing separate pre-school centres. In the internal Territories teachers are employed by the Commonwealth Department of Education; buildings are also provided in the Territories. In Queensland the State Government is also taking steps to provide pre-school education. In all cases parents assist in the provision of equipment.

Pre-school centres are situated in city and country areas and programs are adapted to meet the needs of the children attending. A typical pre-school centre provides half-day sessions for two groups of children. Active parent participation in the running of the centres is encouraged. A limited number of creches and day nurseries provide full-care in closely settled areas, and there is an increasing demand for care for children of working mothers, met in part by privately run centres of varying standards. In a few cities occasional care is available and there are a few residential centres. Major developments have taken place recently in the fields of pre-schooling and child care. The Government announced in February 1973, the appointment of the Australian Pre-Schools Committee, which will become a commission after the passage of enabling legislation. The Committee is to recommend measures the Government should adopt to ensure that all children are given the opportunity to attend pre-school for one year and to establish child care centres for children below school age to meet the needs of children of working parents and under-privileged families. The assistance under the scheme is to begin on 1 January 1974 and priority will be given to establishing centres in localities where the need is greatest.

The previous Australian Government introduced a new scheme of direct financial assistance to eligible and approved non-profit making organisations and local government authorities for child care centres which provide full day care and give priority of admission to children in special need. An amount of \$5 million was set aside for this scheme in 1972–73, including \$200,000 for research. The present Government has since appointed the Child Care Standards Committee to advise it on



the establishment of standards and on the payment of grants. An Advisory Committee on Child Care Research has also been set up to recommend on the payment of grants for appropriate research projects.

It is proposed to incorporate the present Child Care Scheme into the new program of assistance to begin in 1974 which will result from the work of the Australian Pre-Schools Committee.

The Australian Pre-School Association is a national body representing the voluntary organisations who have as their main concern the welfare and education of children of pre-school age. With some financial assistance from the Commonwealth the Association co-ordinates pre-school work for which it sets standards. It administers and supervises the six Lady Gowrie Child Centres which were established by the Commonwealth in consultation with the Australian Pre-School Association in 1940.

*Lady Gowrie Child Centres.* These six Centres, one in each State capital city, were planned to give stimulus to progress in the field of child development, and this has led to the study of educational practice at the pre-school level. They provide opportunities for demonstration and research based on early childhood education. Committees of local management for each Centre include psychiatrists, paediatricians, nurses, social workers, educators and lay persons who, in consultation, have developed an education program based on child development. These Centres are financed mainly by Commonwealth grants. The Commonwealth contribution for 1972-73 was \$231,000.

Radio and television bring some experience of pre-school education within the reach of practically every pre-school child in Australia. The Australian Broadcasting Commission pioneered the program 'Kindergarten of the Air', a twenty-five minute session, broadcast throughout the country from Monday to Friday. The half-hour television program 'Play-School' is also available twice each week-day to children of kindergarten age in State capital cities and country areas.

## Primary and Secondary Education

### Legal basis and administrative responsibility for education

Constitutional authority for education rests primarily with the six State governments. The federal Department of Education is responsible for the administration of education in the internal territories (Northern Territory and Australian Capital Territory) (*see the chapter The Territories of Australia*) and is becoming increasingly involved in financing education throughout Australia (*see pages 674-81*).

Responsibility for framing educational policy and having it put into effect rests with the Minister for Education in each State who is a member of State Cabinet. The administrative authority in each State is a department of education established by an Act of Parliament and headed by a Director-General. The education departments are divided into divisions administering primary, secondary and technical education. (In New South Wales there is a separate Department of Technical Education; in South Australia the Department of Further Education is responsible for technical education.) Other divisions are responsible for such matters as teacher recruitment and in-service training, audio-visual education, curriculum and research, education of atypical children, physical education, psychology and guidance. In addition to the central organisation which serves the State, regional offices of education have been created in New South Wales, Victoria, Queensland, South Australia, and Tasmania under a policy of decentralisation of administration.

During the nineteenth century, the six Australian States established government departments responsible through parliament for the provision of formal education as follows:

*New South Wales.* The Public Instruction Act, 1880 established a Department of Public Instruction. An amendment to the Act in 1916 made schooling compulsory.

*Victoria.* The *Victorian Education Act* 1872 provided for the establishment of an education department, a State Minister for Education and made schooling in Victoria free, compulsory and secular. The Act dates from the first of January 1873.

*Queensland.* The *Education Act* of 1875 established the Department of Public Instruction administered by a responsible Minister of the Crown. The provision in the Act for compulsory schooling was not fully enforced until 1 May 1900.

*South Australia.* The Compulsory Education Act 1875 established a Council of Education to administer public schools and made attendance compulsory (70 days in each half year) for all children between the ages of 7 and 13.

*Western Australia.* The *Education Act* 1893 established a Department of Education to replace the central Board of Education established under the *Education Act* 1871. An amendment to the 1893 Act made enforcement of compulsory education more effective in 1899, although the *Education Act* 1871 had provided for a degree of compulsion.

*Tasmania.* The *Education Act* 1885 established an education department responsible to a Minister of the Crown. Compulsory schooling was adopted in 1869.

School attendance is compulsory throughout Australia between the ages of 6 and at least 15 in New South Wales, Victoria, Queensland and South Australia, until the year in which a student turns 15 in Western Australia, and until the age of 16 in Tasmania. The various Education Acts require that all children between the prescribed ages must attend either a government school or some other recognised educational institution. Exemptions may be granted on the grounds of physical isolation from school, physical disability or family hardship. Education by correspondence is available to exempted students from State education departments.

Commencement of the school year varies between States and usually occurs between the end of January and mid-February. The year usually ends in mid-December for the long summer vacation. Two short vacations divide the school year into three terms.

### Government Schools

Government primary schools usually have mixed classes of boys and girls. At the secondary level practices vary, but the trend is towards co-educational schools.

Tuition at government primary schools is free in all States. Parents are expected to bear the cost of textbooks, uniforms and personal equipment and to pay fees for the use of sports equipment and other facilities. However, these expenditures are tax deductible and the cost of textbooks is in some States subsidised by the government.

Legislation in Queensland and Victoria makes provision for the registration of teachers in government schools. All teachers in South Australia will be registered from 1974. No registration of teachers is yet required in New South Wales, Western Australia and Tasmania.

### Non-government schools

Approximately 20 per cent of Australian children attend non-government primary and secondary schools, sometimes known as 'private' or 'independent' schools. The majority of the schools are conducted by, or are under the auspices of, various religious denominations, particularly the Roman Catholic Church (about 80 per cent in 1972), the Church of England, Presbyterian and Methodist Churches. A few non-government schools are undenominational and are conducted under the auspices of corporate bodies.

Non-government secondary schools have tended to cater for boys and girls separately, but recently a few major schools have become co-educational. The schools follow curricula similar to those laid down by State education departments and prepare their students for examinations conducted by public examining bodies. The methods adopted by education authorities to ensure an acceptable standard of education at non-government schools vary from State to State. New schools are inspected and approved by the State education department. The nature of this approval varies but generally the education department must be satisfied that the education provided is efficient and regular and that the buildings and facilities are suitable.

The States of Victoria and Tasmania require teachers at non-government schools to be registered.

Non-government schools charge tuition fees and, where applicable, boarding fees. Payment is not insisted on in some Roman Catholic parish schools in cases of family hardship, and at the majority of non-government secondary schools, privately endowed scholarships are available and fees are normally reduced for children of clergy and where two or more members of one family attend the same school.

Certain State government scholarships and bursaries are tenable at approved non-government secondary schools. Since 1967, State governments and the Commonwealth Government have introduced direct assistance to non-government schools, usually in the form of student allowances. Most State governments also assist non-government schools with approved building projects. For details of Commonwealth government assistance for the building and equipping of science laboratories and libraries at secondary schools, see page 673.

### Primary education

Although school attendance is not compulsory until the age of 6, most Australian children begin at about 5 in infants schools or classes attached to the primary school. In some States, the first year of the infants department is known as kindergarten. The emphasis in these infants classes, which cover two or three years, is given to games, the development of social attitudes and the informal side of education. There is a gradual movement towards more formal activities in the second and third years, and at the same time creative expression in painting, drawing, handwork, dancing and dramatisation is encouraged.

Children attend primary schools in their own districts on five days each week, and the school day is generally broken up into three or four sessions with breaks between. Daily instruction lasts for about five hours, made up of twenty or thirty minute lessons, and special periods are set aside for



physical education and sport. In general, a class is taken by one teacher who teaches all the subjects set out in the curriculum for that particular grade. However, in some areas new primary schools are being built according to the 'open plan' concept. This allows for more flexible teaching arrangements, where two or more teachers may supervise up to 70 pupils, who are divided into smaller groups during the day for separate activities, including individual study.

Syllabuses of instruction, with emphasis on basic or 'tool' subjects, social studies, and the English language, are drawn up by the education departments, although the teacher may be free to modify the course. In some of the more progressive primary schools, new or more advanced courses in subjects such as foreign languages, science and mathematics are being introduced to prepare children more thoroughly for secondary schooling. Increasing use is being made in the classroom of television, films, tape-recorders and other modern teaching aids.

When primary education has been successfully completed, usually after seven years, the child progresses automatically to a nearby secondary school. Factors determining the type of secondary school a child attends may include the headmaster's recommendations, tests of ability and achievement, the child's wishes and those of his parents.

### Secondary education

In secondary schools children do not usually remain in the one class all day, as they do not all study the same subjects. The subjects offered include a number already studied in primary school, such as English, physical education and music, and new ones such as foreign languages, technical and commercial subjects, along with more detailed and specialised studies in science, history, geography and mathematics. Each school day is divided into 'periods' and the students are taught by a number of teachers, each specialising in a particular group of subjects. In some secondary schools the program in the junior forms is based upon integrated studies and aims at developing pupil-centred activities.

The most common type of secondary school is the comprehensive or multi-purpose high school, which offers a wide range of subjects. To cater for this diversity, most high schools now have modern facilities for the teaching of domestic science, commercial subjects, woodwork and other technical subjects. In some States there are, however, separate high schools specialising in technical, agricultural, commercial or home science fields; some of the agricultural high schools are residential. The curriculum in these specialist schools consists of general academic subjects combined with practical training.

In New South Wales, the Conservatorium High School provides a full six-year secondary course for students who intend to pursue careers in music.

There are also schools in country centres known variously as 'area', 'consolidated', 'district' and 'rural' schools, some of which offer up to four years of secondary study. Matriculation colleges have been developed in major population centres in Tasmania, providing the final two years of secondary schooling. Secondary colleges are also being established in the Australian Capital Territory.

A diagram of State and territorial school systems showing grades, examinations and ages, is shown on plate 37, page 646.

### Examinations

For information on examination procedures up to 1971, see Year Book No. 55, pages 485-6 and Year Book No. 57, page 629.

Traditionally, public examinations set by central examining authorities in each State at junior and senior secondary levels controlled and influenced the curricula to a very large extent. In recent years the junior level examinations, taken at the end of the third, fourth or fifth year of secondary schooling, have been abolished, and their place has been taken by internal school examinations and school assessment. While the senior level examination, taken in the final year and used for matriculation purposes, is still retained in most States, there is a trend towards the abolition of external examinations at this level also. These changes in the examination systems have allowed the development of more broadly-based curricula designed to meet the varying needs, interests and abilities of the students, an increasing proportion of whom are staying on at school beyond the minimum leaving age.

In general, students in the early years of secondary schooling study a basic core of subjects together with some electives, specialisation taking place at a later stage in the course. Experimental projects in curriculum development are being carried out, and individual schools and teachers have more freedom in choosing their educational programs. Certificates awarded at the end of secondary schooling are: New South Wales and the Australian Capital Territory, Higher School Certificates; Victoria, Higher School Certificate; Queensland, Senior; South Australia, and Northern Territory, Matriculation; Western Australia, Leaving; Tasmania, Higher School Certificate.



### Special facilities for students

Details of medical and dental inspection of school children, and the provision of free milk are given in Chapter 14, Public Health. In Year Book No. 55, a general description is given of provisions for isolated areas, schools of the air and correspondence schools (pages 494 and 495), handicapped children and physical education (page 495), and educational guidance and school broadcasting and television (page 496). The following particulars supplement that information.

*Aboriginal education.* Aboriginal children in towns and cities attend the same schools as other Australian children. The curriculum of schools in distinctive Aboriginal communities is adapted to the background and the needs of the children; for example, bilingual education and an emphasis upon traditional arts, crafts and skills are features of an increasing number of Northern Territory schools in Aboriginal towns on reserves. There is unrestricted opportunity for academic progress for Aboriginal students with the ability to proceed through high school to tertiary education. This progress is encouraged and assisted by an Australia-wide Commonwealth Government scheme of Aboriginal secondary grants available to all secondary school children of Aboriginal descent on a non-competitive basis, and an Aboriginal Study Grants Scheme of similar scope covering fees and allowances in respect of tertiary courses. These two schemes form part of the assistance, financial and otherwise, provided by the Commonwealth in the field of Aboriginal education following the 1967 Referendum and Constitution Alteration (Aboriginals) 1967 (*see also* Scholarships and bursaries below). Commonwealth grants to the States for educational projects designed for the benefit of Aboriginal students totalled \$2,887,000 in 1972-73, a considerable proportion of this sum being devoted to the extension and development of pre-schooling facilities.

*School broadcasting.* Both radio and television school broadcasts continue to be used extensively by schools. They are produced by the Australian Broadcasting Commission in co-operation with the State Education Authorities and, as a result of the increasing number of transmitting stations, are now available to almost all schools in the Commonwealth. Approximately 96 per cent of schools make some use of the radio programs and about 75 per cent, of television. During the year almost 3,000 radio programs and about 300 television programs were produced and, in addition, over 200 television programs, relevant to Australian needs, were purchased overseas. The increasing use of audio and videotape recorders by schools, especially in secondary departments, gives a flexibility of usage that has greatly increased the utilisation of programs. There are about 10 hours of radio and 25 hours of television available each week in each State.

*Handicapped children.* The Commonwealth Department of Social Security (previously Department of Social Services), in conjunction with the Commonwealth Departments of Health and of Education (previously Department of Education and Science), commenced a survey of handicapped children in 1970. Payments under the *States Grants (Independent Schools) Act* 1969, which provides assistance to eligible independent schools, including special independent schools for handicapped children, commenced in 1970. Assistance to eligible institutions training handicapped children is also available under the *Handicapped Children (Assistance) Act* 1970 (*see also* page 673). From 1974 the Australian Government will provide substantial additional grants specifically for the education of handicapped children by State and voluntary authorities, and for the training of teachers of the handicapped.

### Scholarships and bursaries

All States have schemes of financial assistance to school students, mostly at the secondary level, through scholarships or bursaries. As tuition in government schools is free, this assistance is usually in the form of maintenance allowances, both for children living with their parents and for those living away from home. These allowances may be paid in a lump sum or in instalments throughout the year. Awards are usually made on the results of a competitive examination, and sometimes a means test is applied. Other government and private authorities, such as the Repatriation Department and the Legacy War Orphans Fund, assist certain categories of students with their school education. Many non-government schools also award scholarships, on a competitive basis, which enable students to attend those particular schools at reduced fees or without payment of fees.

In 1964 the Commonwealth Government, with the co-operation of the State education departments, introduced a program of secondary scholarships to encourage successful candidates to complete the final two years of secondary schooling. From the beginning of 1973, this scheme is being phased out and being replaced by the Commonwealth Senior Secondary Scholarship Scheme. Further details of both Schemes are given on page 665.

Various forms of financial assistance, both government and non-government, are available to help Aborigines to undertake further studies. In 1972, over 700 scholarships were awarded by ABSCHOL, a scholarship scheme organised by the Australian Union of Students; 1000 primary and 218 secondary scholarships were provided by the Aboriginal Education Incentive Scholarship Fund in Victoria; and 97 scholarships (23 primary, 71 secondary and 3 adult) were provided by the Aboriginal Education Council in New South Wales. *See* page 666 for details of the Aboriginal Study Grants Scheme, begun in 1968 by the Commonwealth.

#### **Subsidised transport to and from school**

All the States have systems of subsidies by which transport is free or at a concession rate for children who have to travel to and from school daily. In some States an allowance is paid if private transport has to be used.

#### **Assistance for children living in remote areas.**

In 1973 the Australian Government introduced a scheme of financial assistance to enable children living in isolated areas to have improved educational opportunities. Benefits include allowances of up to \$1,004 per annum, of which \$350 is free of means test, for pupils who must live away from home to attend school. Assistance of up to \$350 per annum is paid to pupils taking studies through State education department correspondence schools.

#### **School buildings**

The increase in the school population in the last decade led to an expansion in school building. To cope with this growth in population, it has been necessary to make use of temporary and emergency structures. Quite large schools are being built in stages to match increases in local population in new and rapidly developing suburbs in metropolitan areas. For details of assistance provided by the Commonwealth for the building and equipping of science laboratories and library facilities in secondary schools, *see* page 673.

#### **Textbooks, materials and other equipment**

The State education departments supply government schools free of charge with essential equipment including scientific apparatus, maps, blackboards, chalk, cleaning materials, and non-consumable equipment for commercial, home science and technical subjects. Garden tools and physical training equipment are also supplied in most States. Readers and writing equipment for individual students are sometimes supplied free in primary schools, and several education departments produce monthly school magazines which are supplied free or at a nominal price. In primary schools (except in one State where textbooks are made available free to children in both government and non-government primary schools) and in secondary schools, textbooks must, however, be purchased by students. In several States, schools own stocks of textbooks which are hired to students, and in one State, secondary textbooks are sold at reduced prices. In four States certain textbook costs are subsidised for students attending government and non-government schools. The parent organisations, with the assistance of subsidies from the education departments, are usually responsible for providing equipment such as radios and television sets, film strip projectors, pianos, duplicators and, in particular, library books.

#### **Teaching aids**

Each State education department has a branch producing and distributing teaching aids. Film strips and posters are distributed free or at low cost. Films are held in central libraries and are requisitioned by schools as required for teaching purposes. Some central libraries are able to provide copies of audio and videotape recordings. Commonwealth financial assistance under the Secondary Schools Libraries Program is available to State education departments for a range of audio-visual equipment.

#### **Parent organisations**

In Australia, where all government schools are administered by central departments, there is limited opportunity for local participation in education. However, increasing involvement of members of the community in education is being actively encouraged in a number of States and in the Territories. Public interest is expressed through parents committees or organisations of parents and other citizens interested in supporting their local school. The Education Acts of all States provide for the formation of groups of this type, whose aims are to promote an interest in the school by bringing

parents and teaching staff together, to help provide supplementary teaching aids and recreation materials, to foster the regular attendance of children at school, and to help find accommodation for teachers. The associations do not exercise authority over the staff for the management of the school. In several States the general maintenance of school buildings, equipment and grounds is a statutory responsibility of the parent groups, costs being covered by government grants. Lunch canteen services at local schools are maintained by groups in some States. Parent groups have established school children's insurance schemes, operated through State Government insurance offices or private insurance companies. These schemes cover children for accidents which may occur between the time of leaving home for school and returning home by the usual direct route. State-wide councils of federations of parent groups are associated in a federal body, the Australian Council of State School Organisations.

Many non-government schools also have parents associations, which may raise funds for special projects.

### Research

All State education departments have branches undertaking research directed towards departmental activities. The work of the research branches is concerned with such matters as curriculum content, new teaching methods, evaluation procedures, wastage rates and education statistics. Education research is also carried out by institutes such as the Victorian Institute for Educational Research, by research faculties and departments of education in universities, by colleges of advanced education, by the Commonwealth Department of Education and by the Australian Council for Educational Research.

### Curriculum development

While State education departments are responsible for the development of the curricula followed in their schools, the Commonwealth is prepared to consider support for proposals in the field of curriculum development if they are put forward by the States. Three such proposals are at present receiving Commonwealth financial support. They are:

*Australian Science Education Project.* This project is developing science learning materials for the first four years of secondary school. The Australian Government will contribute \$875,000 to the cost of the Project, and the States \$525,000, over the five-year period commencing in 1969. The Project will complete its scheduled task in March 1974.

*National Committee on Social Science Teaching.* This Committee was established in 1970 as a joint project between the Australian Government and the States to help foster development and improvement in the teaching of social science in Australian schools.

*Asian languages and cultures.* The report of the Advisory Committee on the Teaching of Asian Languages and Cultures, a Committee set up by the Australian Government in 1969, was tabled in Parliament in March 1971. As a result of the Committee's findings the Australian Government agreed in 1972 to contribute \$1.5 million over five years to a joint program with the States in this area of the curriculum. A joint Australian Government-States committee has been established to co-ordinate this program.

In June 1973 the Australian Government announced that it was establishing, in co-operation with the States, a curriculum development centre to undertake and promote curriculum development and to develop and assess teaching materials. The centre will be funded by the Australian Government.

## Numbers of schools, teachers and students

The statistics which follow relate generally to schools providing education according to the primary or secondary school curricula of the various State education departments, or both, whether provided in government or non-government schools. Junior technical schools, correspondence schools, and schools in institutional homes, hospitals and similar establishments are included. Institutions providing only pre-school education, senior technical and agricultural colleges, evening schools, continuation classes, and institutions such as business colleges and coaching establishments are, as a rule, excluded.

School censuses are conducted annually at or about the beginning of August throughout all States and Territories of Australia. The numbers of students in the tables which follow refer to enrolments at the school census date. The numbers of schools and teachers refer to the position at dates



which vary from State to State and in some instances from year to year. While it has not been possible to present all figures on a uniform basis between States, continuity of the figures for any one State over the period of years shown has been maintained as far as possible.

### Schools, teachers and students

The statistics of government and non-government schools, teachers and students in 1972 and earlier years are shown in the following tables. For more detailed statistics, see annual bulletin *Schools* (13.5).

NUMBERS OF SCHOOLS, TEACHERS AND STUDENTS, BY CATEGORY OF SCHOOL STATES AND TERRITORIES, 1972

	Government schools	Non-government schools						Total	All schools
		Denominational							
		Church of England	Methodist	Presbyterian	Roman Catholic	Other	Undenominational		
		SCHOOLS							
New South Wales.	2,335	36	6	12	644	26	94	818	3,153
Victoria . . .	2,194	32	4	11	473	28	22	570	2,764
Queensland . .	1,229	13	(a)	4	291	19	12	339	1,568
South Australia .	615	10	3	2	118	22	8	163	778
Western Australia.	606	10	3	2	165	10	7	197	803
Tasmania . . .	239	4	1	2	45	6	1	59	298
Northern Territory	90	..	2	..	12	1	4	19	109
Australian Capital Territory . .	54	3	..	..	20	1	1	25	79
Australia—1972 .	7,362	108	19	33	1,768	113	149	2,190	9,552
1971 . . .	7,404	107	20	33	1,769	113	142	2,184	9,588
1970 . . .	7,470	108	19	33	1,781	112	127	2,180	9,650
1969 . . .	7,541	110	18	34	1,785	109	119	2,175	9,716
1968 . . .	7,629	113	20	38	1,807	112	93	2,183	9,812

<b>TEACHERS(b)</b>									
New South Wales.	36,558	1,006	194	374	7,111	166	621	9,472	46,030
Victoria . . .	30,160	1,211	253	561	5,171	509	369	8,074	38,233
Queensland . .	13,454	360	(a)	55	2,690	217	261	3,585	17,039
South Australia .	10,767	251	123	99	999	131	120	1,722	12,489
Western Australia.	7,761	285	122	105	1,204	51	22	1,789	9,550
Tasmania . . .	3,786	96	23	44	392	95	7	655	4,442
Northern Territory	831	..	18	..	87	9	4	(c)118	949
Australian Capital Territory . .	1,230	114	..	..	333	1	6	454	1,684
Australia—1972 .	104,547	3,323	733	1,238	17,986	1,178	1,410	25,869	130,416
1971 . . .	99,011	3,266	750	1,201	17,270	1,118	1,285	24,889	123,901
1970 . . .	95,382	3,152	741	1,214	16,577	1,057	1,215	23,956	119,338
1969 . . .	91,888	3,006	711	1,165	15,413	993	1,136	22,423	114,311
1968 . . .	87,560	2,942	693	1,171	15,002	974	1,053	21,835	109,394

<b>STUDENTS (SCHOOL CENSUS)</b>									
New South Wales.	779,854	14,642	3,006	5,752	188,274	2,634	7,092	221,400	1,001,254
Victoria . . .	602,614	17,717	4,224	8,391	149,273	7,431	5,119	192,155	794,769
Queensland . .	306,570	5,729	(a)	977	75,462	4,199	4,645	91,012	397,582
South Australia .	232,812	3,859	2,221	1,594	26,106	2,509	1,400	37,689	270,501
Western Australia.	183,539	4,210	2,050	1,508	33,001	1,037	492	42,298	225,837
Tasmania . . .	78,212	1,557	327	538	9,859	1,339	171	13,791	92,003
Northern Territory	16,799	..	493	..	2,321	236	26	3,076	19,875
Australian Capital Territory . .	28,541	1,802	..	..	8,618	22	147	10,589	39,130
Australia—1972 .	2,228,941	49,516	12,321	18,760	492,914	19,407	19,092	612,010	2,840,951
1971 . . .	2,196,571	49,010	12,309	18,645	494,725	18,755	17,630	611,074	2,807,645
1970 . . .	2,160,177	48,315	12,266	18,664	493,849	18,007	16,955	608,056	2,768,233
1969 . . .	2,113,963	47,376	12,086	18,623	491,219	17,299	16,395	602,998	2,716,961
1968 . . .	2,054,788	46,741	12,055	18,634	490,838	16,889	15,766	600,923	2,655,711

(a) There are no Methodist schools in Queensland. Schools conducted by the Presbyterian and Methodist Schools Association are included with 'other'. (b) Excludes teachers-in-training generally. Figures are full-time teachers plus part-time teachers expressed in equivalent full-time units. For basis of calculating equivalent full-time units, see footnote (b) to next table. (c) Excludes unqualified teachers and teaching assistants at mission schools.

## NUMBERS OF TEACHERS: STATES AND TERRITORIES, 1972(a)

	Government schools			Non-government schools			All schools		
	Part-time			Part-time			Part-time		
	Full-time	No.	Equiv. f.t.u. (b)	Full-time	No.	Equiv. f.t.u. (b)	Full-time	No.	Equiv. f.t.u. (b)
New South Wales	34,970	2,882	1,588	8,725	2,184	747	43,695	5,066	2,335
Victoria	27,756	(c)4,308	(c)2,404	7,499	1,636	575	35,255	5,944	2,978
Queensland	13,454	(d)	(d)	3,385	823	200	16,839	823	200
South Australia	10,253	920	514	1,505	586	217	11,758	1,506	731
Western Australia	7,610	362	151	1,659	433	130	9,269	795	281
Tasmania	3,729	159	57	565	215	90	4,294	374	148
Northern Territory(e)	819	27	12	115	7	3	934	34	15
Australian Capital Territory	1,183	84	47	418	96	36	1,601	180	83
Australia—1972	99,774	8,742	4,773	23,871	5,980	1,998	123,645	14,722	6,771
1971	94,731	8,300	4,280	22,988	5,773	1,901	117,719	14,073	6,182
1970	92,022	6,851	3,359	22,187	5,963	1,769	114,209	12,814	5,129
1969	89,086	5,867	2,802	20,956	5,000	1,467	110,042	10,867	4,269
1968	84,922	5,579	2,637	20,467	5,052	1,368	105,389	10,631	4,005

(a) Excludes teachers-in-training generally. (b) The methods used for calculating equivalent full-time units of part-time teaching vary from State to State, between government and non-government schools, and between primary and secondary schools within States. For most schools the information is based on either the total hours worked or total number of class periods taken in a week by part-time teachers, in relation to the normal hours worked or periods taken by full-time teachers. (c) If a full-time teacher teaches both senior and junior technical school pupils, he is counted as part-time in these statistics (which include junior technical, but not senior technical schools), if his teaching load in the junior school is less than 75 per cent. (d) Since 1969, the Queensland Education Department has employed only full-time teachers. (e) Unqualified teachers and teaching assistants at mission schools are excluded.

GOVERNMENT AND NON-GOVERNMENT SCHOOLS: STUDENTS, BY SEX, STATES  
AND TERRITORIES, 1972  
(School census enrolment)

	Government schools			Non-government schools			All schools		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
New South Wales	406,926	372,928	779,854	111,606	109,794	221,400	518,532	482,722	1,001,254
Victoria	315,876	286,738	602,614	94,368	97,787	192,155	410,244	384,525	794,769
Queensland	159,694	146,876	306,570	46,009	45,003	91,012	205,703	191,879	397,582
South Australia	121,738	111,074	232,812	18,539	19,150	37,689	140,277	130,224	270,501
Western Australia	96,496	87,043	183,539	20,164	22,134	42,298	116,660	109,177	225,837
Tasmania	40,775	37,437	78,212	6,566	7,225	13,791	47,341	44,662	92,003
Northern Territory	8,600	8,199	16,799	1,510	1,566	3,076	10,110	9,765	19,875
Australian Capital Territory	14,567	13,974	28,541	5,634	4,955	10,589	20,201	18,929	39,130
Australia—1972	1,164,672	1,064,269	2,228,941	304,396	307,614	612,010	1,469,068	1,371,883	2,840,951
1971	1,149,493	1,047,078	2,196,571	303,474	307,600	611,074	1,452,967	1,354,678	2,807,645
1970	1,130,925	1,029,252	2,160,177	301,935	306,121	608,056	1,432,860	1,335,373	2,768,233
1969	1,107,082	1,006,881	2,113,963	299,102	303,896	602,998	1,406,184	1,310,777	2,716,961
1968	1,076,999	977,789	2,054,788	297,446	303,477	600,923	1,374,445	1,281,266	2,655,711

GRADES AND EXAMINATIONS IN THE PRIMARY AND SECONDARY SCHOOL SYSTEMS IN EACH STATE AND TERRITORY, 1972

The grade terminology follows, as nearly as possible, that used in government primary and high schools in each State in 1972. It is not necessarily used in all types of schools. The grades have been written in to agree with the age-scale shown on the diagram, in order to indicate differences in age-grade patterns between States. However, age-grade information is not precise enough to allow determination of accurate average age of students in each grade; and the age indications are therefore only approximate. The diagram should not be taken as a comparison of academic standards of grades between States. For a more detailed presentation of the systems operating in each State, reference should be made to diagrams etc. appearing in the annual reports of State Education Departments.

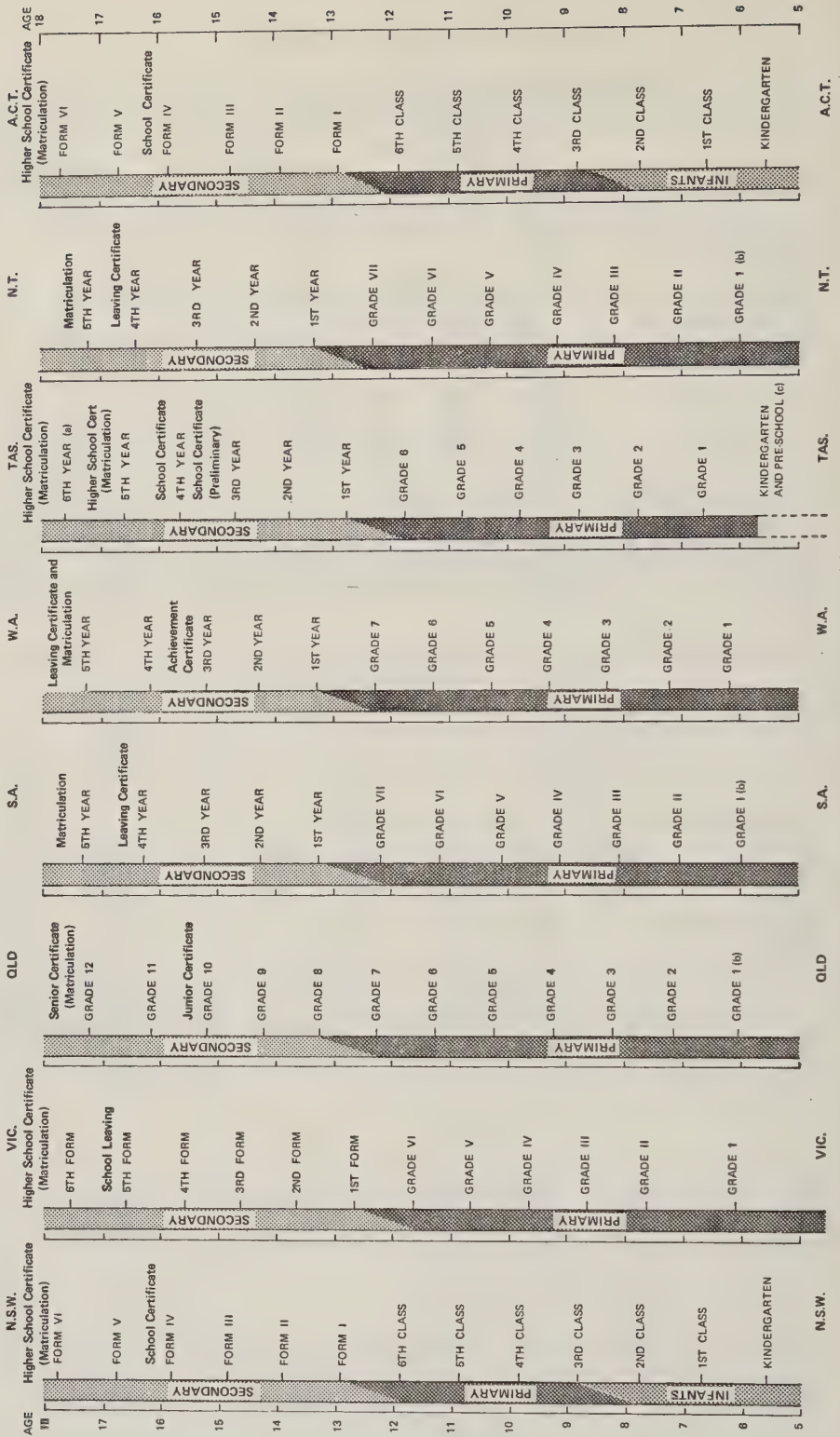


PLATE 37

(a) In Tasmania many students study for the Higher School Certificate over a two year period.  
(b) Preparatory grades are attached to some schools in Queensland, South Australia and the Northern Territory.  
(c) In Tasmania, many students attend two years pre-school, one year Kindergarten grade, or one year of both, before entering grade 1.



**GOVERNMENT AND NON-GOVERNMENT SCHOOLS: STUDENTS, BY AGE AND SEX  
AUSTRALIA, 1972**

(School census enrolment)

Age last birthday (years)	Government schools			Non-government schools			All schools		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Under 6	82,678	77,626	160,304	20,225	20,496	40,721	102,903	98,122	201,025
6	97,743	91,853	189,596	23,043	23,277	46,320	120,786	115,130	235,916
7	98,605	92,534	191,139	24,291	24,295	48,586	122,896	116,829	239,725
8	102,757	95,798	198,555	24,878	25,163	50,041	127,635	120,961	248,596
9	104,636	98,006	202,642	25,478	25,996	51,474	130,114	124,002	254,116
10	105,987	99,194	205,181	25,970	26,619	52,589	131,957	125,813	257,770
11	105,864	98,212	204,076	26,630	27,233	53,863	132,494	125,445	257,939
12	101,770	94,285	196,055	26,566	28,129	54,695	128,336	122,414	250,750
13	100,036	92,602	192,638	25,995	27,529	53,524	126,031	120,131	246,162
14	97,298	89,610	186,908	25,346	26,954	52,300	122,644	116,564	239,208
15	78,375	69,065	147,440	22,974	23,946	46,920	101,349	93,011	194,360
16	51,462	40,644	92,106	17,342	16,415	33,757	68,804	57,059	125,863
17	27,007	19,791	46,798	11,889	9,507	21,396	38,896	29,298	68,194
18	8,702	4,403	13,105	3,074	1,694	4,768	11,776	6,097	17,873
19 and over	1,601	507	2,108	695	361	1,056	2,296	868	3,164
<b>Total</b>	<b>1,164,672</b>	<b>1,064,269</b>	<b>2,228,941</b>	<b>304,396</b>	<b>307,614</b>	<b>612,010</b>	<b>1,469,068</b>	<b>1,371,883</b>	<b>2,840,951</b>
	(a)	(a)	(a)				(a)	(a)	(a)

(a) Includes 290 primary students (151 males, 139 females) in South Australia, whose ages are not known.

**SCHOOLS: STUDENTS, BY AGE, STATES AND TERRITORIES, 1972**

(School census enrolment)

Age last birthday (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Under 6	79,251	62,219	19,345	18,986	8,760	6,169	2,944	3,351	201,025
6	81,198	65,499	34,389	22,020	20,123	7,181	2,097	3,409	235,916
7	81,907	66,931	35,057	22,591	20,487	7,575	1,919	3,258	239,725
8	85,510	68,272	37,167	22,943	21,155	8,168	1,974	3,407	248,596
9	88,121	69,029	37,884	23,656	21,977	8,241	1,798	3,410	254,116
10	90,231	69,628	38,498	23,975	21,754	8,473	1,728	3,483	257,770
11	89,588	69,812	38,303	24,415	21,717	8,937	1,754	3,413	257,939
12	87,101	67,012	38,121	24,032	21,376	8,356	1,554	3,198	250,750
13	84,933	67,079	36,787	23,793	20,896	8,230	1,334	3,110	246,162
14	83,294	65,347	35,301	23,074	19,937	8,063	1,185	3,007	239,208
15	69,464	55,708	24,803	19,446	14,898	6,705	902	2,434	194,360
16	43,782	40,771	13,547	13,540	8,223	3,605	470	1,925	125,863
17	26,977	21,281	6,796	5,775	4,114	1,772	169	1,310	68,194
18	8,850	5,032	1,346	1,438	385	400	41	381	17,873
19 and over	1,047	1,149	238	527	35	128	6	34	3,164
<b>Total</b>	<b>1,001,254</b>	<b>794,769</b>	<b>397,582</b>	<b>270,501</b>	<b>225,837</b>	<b>92,003</b>	<b>19,875</b>	<b>39,130</b>	<b>2,840,951</b>
				(a)					(a)

(a) Includes 290 primary students (151 males, 139 females) whose ages are not known.

## Universities

Applicants for enrolment in Australian universities are required to have reached matriculation standard, usually after five or six years of secondary education. Each university has its own regulations for matriculation, specifying the number and combination of subjects to be passed or the level of performance required. Students entering the universities have the choice of undergraduate study in various faculties. All universities also provide post-graduate courses of study.

In 1972 there were fifteen operative universities in Australia. Details of the courses offered by these universities, together with background information on their teaching and research programs, and a summary of general university development in recent years are given in Year Book No. 55, pages 507-9. By 1975, two new universities will be taking students, the Griffith University in Queensland and the Murdoch University in Western Australia. In addition, the Wollongong University College will become an autonomous university in 1975.

The following tables show statistics of university staff, student enrolments, assisted students, degrees conferred, diplomas and certificates awarded, income and expenditure. The first table gives summary statistics for each university and branch whereas the other tables provide State figures only. Reference should also be made to the annual publications *University Statistics, Parts 1-3* (13.7, 13.8, 13.9) for further details.

# UNIVERSITIES: SUMMARY STUDENT AND STAFF STATISTICS FOR EACH UNIVERSITY AND BRANCH, 1972

	Students enrolled(a) for			All students	Teaching staff(b)		Non-teaching staff	
	Higher degree courses	Bachelor degree courses	Non-degree courses		Full-time	Part-time(c)	Full-time	Part-time(d)
University of Sydney	2,533	13,185	1,390	17,108	1,073	1,339	2,243	109
University of New South Wales—								
Kensington	1,901	12,701	1,541	16,143	993	852	1,840	88
Wollongong University College	103	1,305	78	1,486	93	30	117	8
Broken Hill Division	7	88	11	106	13	10	33	..
Duntroon	6	327	..	333	60	5	2	..
Jervis Bay	..	17	..	17	(e)	(e)	(e)	(e)
Total University of New South Wales	2,017	14,438	1,630	18,085	1,159	898	1,992	97
University of New England	390	5,055	753	6,198	361	83	770	44
University of Newcastle	290	3,185	283	3,758	237	197	275	13
Macquarie University	546	5,034	205	5,785	392	143	547	43
Total New South Wales	5,776	40,897	4,261	50,934	3,222	2,659	5,827	307
University of Melbourne	1,764	11,891	1,361	15,016	926	1,362	1,935	43
Monash University	1,155	9,539	939	11,633	789	538	1,635	211
La Trobe University	265	3,624	413	4,302	293	85	547	119
Total Victoria	3,184	25,054	2,713	30,951	2,008	1,986	4,117	374
University of Queensland	1,187	15,040	903	17,130	980	831	1,788	169
James Cook University	158	1,287	16	1,461	146	67	279	1
Total Queensland	1,345	16,327	919	18,591	1,126	898	2,067	170
University of Adelaide	954	6,896	729	8,579	560	609	1,102	163
Flinders University	192	2,102	251	2,545	204	143	361	73
Total South Australia	1,146	8,998	980	11,124	764	752	1,463	236
University of Western Australia	642	7,231	780	8,653	507	573	1,045	105
University of Tasmania	202	2,744	425	3,371	248	60	387	34
Australian National University—								
Institute of Advanced Studies	350	..	9	359	..	..	1,392	..
School of General Studies	390	3,968	327	4,685	339	75	375	..
Total Australian Capital Territory	740	3,968	336	5,044	(f)343	(f)98	(g)2,632	(g)15
Total all universities	13,035	105,219	10,414	128,668	8,216	7,026	17,538	1,240

(a) Statistics shown refer to net enrolments, i.e. gross enrolments adjusted for students enrolled for more than one course. If a student is enrolled for two or more courses at different levels, the adjustment is made against the lesser level. (b) Excludes research only staff. (c) Expressed as units of 100 teaching hours per annum. (d) Equivalent full-time units. (e) No university staff are attached to the R.A.N. College, Jervis Bay. (f) Includes 4 full-time and 23 part-time positions not allocated to either the Institute or the School. (g) Includes 865 full-time and 15 part-time positions not allocated to either the Institute or the School.

## UNIVERSITIES: TEACHING AND RESEARCH STAFF(a), 1972

	Full-time teaching staff(b)				Total	Part-time teaching staff(d)	Full-time research staff(e)	Part-time research staff(e)(f)
	Professors	Associate professors and readers	Senior lecturers and lecturers	Assistant lecturers, demonstrators, etc.(c)				
New South Wales	309	321	1,771	821	3,222	2,659	305	22
Victoria	216	186	1,150	455	2,008	1,986	218	28
Queensland	96	123	579	328	1,126	898	208	17
South Australia	100	86	448	131	764	752	89	8
Western Australia	55	59	277	116	507	573	73	5
Tasmania	33	24	135	56	248	60	13	1
Australian Capital Territory	44	38	196	65	343	98	645	..
Australia—1972	853	837	4,555	1,971	8,216	7,026	1,550	81
1971	821	765	4,393	1,856	7,835	7,136	1,385	72
1970	799	714	4,130	1,724	7,367	6,845	1,345	54
1969	777	638	4,011	1,593	7,018	6,423	1,268	55
1968	721	582	3,706	1,479	6,487	6,264	1,155	45

(a) Occupied positions. (b) Excludes research only staff which are shown separately. (c) Includes tutors and teaching fellows. (d) Expressed in units of 100 teaching hours per annum. (e) Excludes research technical staff. (f) In equivalent full-time units of 35 hours per week.

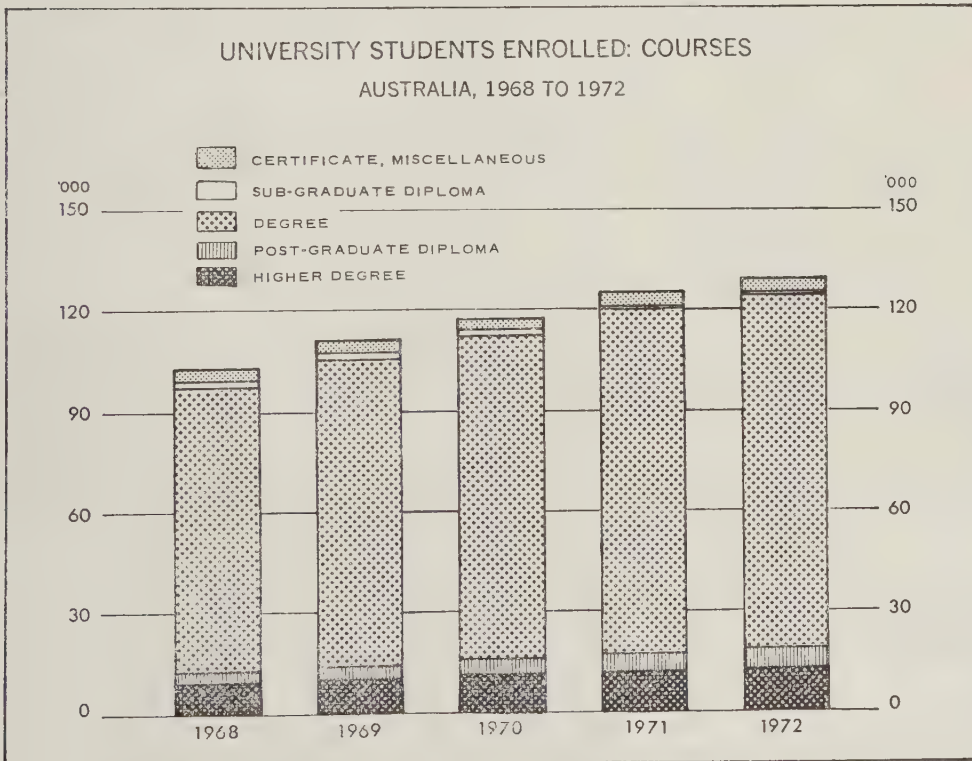
## University students enrolled

## UNIVERSITIES: STUDENTS ENROLLED(a), 1972

	Degree courses		Diploma courses		Certificate courses	Other courses (b)	Adjusted total(c)
	Higher degree	Bachelor degree	Post-graduate	Sub-graduate			
New South Wales . . .	5,784	41,022	2,694	9	410	1,258	50,934
Victoria . . . . .	3,198	25,960	1,614	257	..	1,028	30,951
Queensland . . . .	1,345	16,327	503	19	..	397	18,591
South Australia . .	1,146	9,029	685	17	1	338	11,124
Western Australia .	642	7,243	440	..	..	365	8,653
Tasmania . . . . .	202	2,744	258	5	3	159	3,371
Australian Capital Territory . . .	740	3,975	..	..	..	357	5,044
<b>Australia—1972 . . .</b>	<b>13,057</b>	<b>106,300</b>	<b>6,194</b>	<b>307</b>	<b>414</b>	<b>3,902</b>	<b>128,668</b>
1971 . . . . .	12,469	102,644	5,271	404	455	3,853	123,776
1970 . . . . .	11,549	97,357	4,159	990	379	3,531	116,778
1969 . . . . .	10,564	90,738	4,229	1,204	635	3,618	109,662
1968 . . . . .	9,230	84,317	3,596	1,625	459	3,662	101,537

(a) Statistics shown refer to gross enrolments, i.e. students enrolled for two or more courses are included in each course for which they are enrolled. (b) Includes post-doctoral courses, master preliminary courses and students enrolled in one or more subjects of a normal course without having been admitted to the course as a whole. (c) Adjusted for students enrolled for more than one course. Where course levels differ, the adjustment is made against the lesser level.

Of the students enrolled in 1972, 86,540 were males and 42,128 were females.





## University students commencing courses

## UNIVERSITIES: ENROLMENTS OF STUDENTS COMMENCING HIGHER DOCTOR, PH.D., MASTER AND BACHELOR DEGREE COURSES FOR THE FIRST TIME IN ANY AUSTRALIAN UNIVERSITY, 1972(a)

	Higher doctor degree courses	Ph.D. degree courses	Master degree courses	Bachelor degree courses	Total
New South Wales . . . . .	6	236	1,235	10,735	12,212
Victoria . . . . .	10	243	740	7,122	8,115
Queensland . . . . .	16	134	270	3,355	3,775
South Australia . . . . .	8	108	166	2,378	2,660
Western Australia . . . . .	..	63	119	1,931	2,113
Tasmania . . . . .	..	16	31	712	759
Australian Capital Territory . . . . .	..	129	90	850	1,069
<b>Australia—1972 . . . . .</b>	<b>40</b>	<b>929</b>	<b>2,651</b>	<b>27,083</b>	<b>30,703</b>
1971 . . . . .	41	796	2,253	26,433	29,523
1970 . . . . .	27	856	1,990	26,305	29,178

(a) Statistics shown refer to gross enrolments, i.e. students enrolled for two or more courses are included in each course for which they are enrolled.

Of students commencing higher and bachelor degree courses in 1972, 19,415 were males and 11,008 were females.

## Full-time and other university students by level of course

## UNIVERSITIES: FULL-TIME AND PART-TIME STUDENTS ENROLLED BY COURSE LEVEL AND SEX OF STUDENT(a), 1968 TO 1972

Level of course	Males					Females				
	1968	1969	1970	1971	1972	1968	1969	1970	1971	1972
FULL-TIME										
Higher degree . . . . .	3,413	3,756	3,963	4,293	4,295	591	703	783	889	973
Bachelor degree . . . . .	39,597	42,469	45,374	47,311	48,851	16,674	18,634	21,137	23,863	25,698
Post-graduate diploma . . . . .	861	911	968	1,148	1,344	1,098	1,276	1,053	1,731	2,270
Sub-graduate diploma . . . . .	255	155	145	67	64	612	491	424	153	110
Certificate . . . . .	242	438	255	368	294	39	67	36	46	55
Other . . . . .	250	244	231	318	382	219	248	239	309	281
<b>Total enrolments . . . . .</b>	<b>44,618</b>	<b>47,973</b>	<b>50,936</b>	<b>53,505</b>	<b>55,430</b>	<b>19,233</b>	<b>21,419</b>	<b>23,672</b>	<b>26,991</b>	<b>29,387</b>
<b>Number of students(b) . . . . .</b>	<b>43,911</b>	<b>47,285</b>	<b>50,290</b>	<b>52,829</b>	<b>54,612</b>	<b>18,824</b>	<b>21,063</b>	<b>23,355</b>	<b>26,608</b>	<b>28,983</b>
PART-TIME(c)										
Higher degree . . . . .	4,345	5,073	5,685	6,032	6,429	881	1,032	1,118	1,255	1,360
Bachelor degree . . . . .	20,508	21,556	22,118	22,232	21,902	7,538	8,079	8,728	9,238	9,849
Post-graduate diploma . . . . .	1,119	1,437	1,492	1,561	1,532	518	605	646	831	848
Sub-graduate diploma . . . . .	450	362	264	141	98	308	196	157	43	35
Certificate . . . . .	131	110	75	29	62	47	20	13	12	3
Other . . . . .	2,175	2,192	2,089	2,154	2,084	1,018	934	972	1,072	1,155
<b>Total enrolments . . . . .</b>	<b>28,728</b>	<b>30,730</b>	<b>31,733</b>	<b>32,149</b>	<b>32,107</b>	<b>10,310</b>	<b>10,866</b>	<b>11,634</b>	<b>12,451</b>	<b>13,250</b>
<b>Number of students(b) . . . . .</b>	<b>28,559</b>	<b>30,537</b>	<b>31,557</b>	<b>31,971</b>	<b>31,928</b>	<b>10,243</b>	<b>10,777</b>	<b>11,576</b>	<b>12,368</b>	<b>13,145</b>
ALL ENROLMENTS										
Higher degree . . . . .	7,758	8,829	9,648	10,325	10,724	1,472	1,735	1,901	2,144	2,333
Bachelor degree . . . . .	60,105	64,025	67,492	69,543	70,753	24,212	26,713	29,865	33,101	35,547
Post-graduate diploma . . . . .	1,980	2,348	2,460	2,709	3,076	1,616	1,881	1,699	2,562	3,118
Sub-graduate diploma . . . . .	705	517	409	208	162	920	687	581	196	145
Certificate . . . . .	373	548	330	397	356	86	87	49	58	58
Other . . . . .	2,425	2,436	2,320	2,472	2,466	1,237	1,182	1,211	1,381	1,436
<b>Total enrolments . . . . .</b>	<b>73,346</b>	<b>78,703</b>	<b>82,659</b>	<b>85,654</b>	<b>87,537</b>	<b>29,543</b>	<b>32,285</b>	<b>35,306</b>	<b>39,442</b>	<b>42,637</b>
<b>Number of students(b) . . . . .</b>	<b>72,470</b>	<b>77,822</b>	<b>81,847</b>	<b>84,800</b>	<b>86,540</b>	<b>29,067</b>	<b>31,840</b>	<b>34,931</b>	<b>38,976</b>	<b>42,128</b>

(a) Statistics for 1968 and 1969 refer to the situation at 30 June; and those for 1970, 1971 and 1972 refer to 30 April. (b) Adjusted for students enrolled for more than one course. (c) Includes external students.

## Assistance to university students

The Commonwealth Government, through the Commonwealth Scholarships Board, grants undergraduate and post-graduate scholarships to university students. Details of the Commonwealth Scholarship Scheme are given on page 665. Commonwealth, State and local governments also award cadetships and other assistance to their employees. Foreign students are assisted by the Commonwealth Government under arrangements such as the Colombo Plan. The universities themselves grant exhibitions and scholarships as well as special assistance to university staff, teachers, etc.

## UNIVERSITIES: SOURCE OF STUDENT ASSISTANCE, 1972

	<i>Source of assistance</i>					<i>Type of course</i>	
	<i>Common- wealth Govern- ment</i>	<i>State Govern- ments</i>	<i>Uni- versities</i>	<i>Other</i>	<i>Adjusted total(a)</i>	<i>Higher degree</i>	<i>Other</i>
New South Wales . . .	15,439	1,127	18,452	789	31,474	2,631	33,176
Victoria . . .	11,246	6,688	8,725	235	20,977	1,849	25,045
Queensland . . .	5,658	747	1,609	210	8,224	720	7,504
South Australia . . .	3,841	2,651	1,240	115	7,783	821	7,026
Western Australia . . .	2,835	5,000	246	115	8,182	570	7,626
Tasmania . . .	1,185	621	52	85	1,885	100	1,843
Australian Capital Territory . . .	1,609	313	692	21	2,447	760	1,875
<b>Australia—1972 . . .</b>	<b>41,813</b>	<b>17,147</b>	<b>31,016</b>	<b>1,570</b>	<b>80,972</b>	<b>7,451</b>	<b>84,095</b>
1971 . . .	39,206	18,724	26,384	1,668	75,282	6,896	79,086
1970 . . .	35,008	17,641	22,979	1,607	67,334	6,537	70,698
1969 . . .	32,425	16,134	22,400	1,983	63,110	6,269	66,673
1968 . . .	29,355	14,589	20,392	1,651	57,417	5,473	60,514

(a) Adjusted for students receiving assistance from more than one source or for more than one course.

## University degrees conferred, and diplomas and certificates awarded

UNIVERSITIES: DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES AWARDED  
YEAR ENDED 30 JUNE 1972

	<i>Degrees</i>				<i>Diplomas</i>			
	<i>Higher doctor</i>	<i>Ph.D.</i>	<i>Master</i>	<i>Bachelor</i>	<i>Total</i>	<i>Post- graduate</i>	<i>Sub- graduate</i>	<i>Certi- ficates</i>
New South Wales . . .	23	231	650	6,368	7,272	349	4	290
Victoria . . .	15	174	288	4,366	4,843	837	156	..
Queensland . . .	6	64	97	2,272	2,439	266	33	161
South Australia . . .	12	72	42	1,689	1,815	237	50	..
Western Australia . . .	3	48	46	1,036	1,133	227	..	..
Tasmania . . .	..	9	9	537	555	109	4	20
Australian Capital Territory . . .	..	127	54	609	790	..	..	..
<b>Australia—1972 . . .</b>	<b>59</b>	<b>725</b>	<b>1,186</b>	<b>16,877</b>	<b>18,847</b>	<b>3,025</b>	<b>247</b>	<b>471</b>
1971 . . .	59	658	1,067	14,994	16,778	2,551	302	467
1970 . . .	54	609	888	13,484	15,035	2,324	328	550
1969 . . .	53	490	811	13,360	14,714	2,237	406	673
1968 . . .	31	475	740	11,576	12,822	1,939	557	471

## University income and expenditure

## UNIVERSITIES: INCOME, 1971

(\$'000)

	Government grants(a)		Other income			Total income
	Cwlth Government grants	State Government grants	Donations and endowments(b)	Student fees(c)	Other income	
New South Wales . . . . .	37,714	41,978	7,185	10,518	5,019	102,413
Victoria . . . . .	27,512	29,198	2,711	9,294	5,017	73,732
Queensland . . . . .	10,937	12,734	3,422	4,568	544	32,206
South Australia . . . . .	9,750	11,455	976	2,216	1,187	25,583
Western Australia . . . . .	5,599	7,488	1,300	2,293	894	17,573
Tasmania . . . . .	2,622	2,900	67	1,062	274	6,925
Australian Capital Territory . . . . .	33,071	..	621	951	2,827	37,470
<b>Australia—1971 . . . . .</b>	<b>127,204</b>	<b>105,752</b>	<b>16,283</b>	<b>30,900</b>	<b>15,761</b>	<b>295,902</b>
1970 . . . . .	108,539	87,796	11,832	27,368	13,661	249,195
1969 . . . . .	93,887	83,285	11,784	22,825	11,359	223,140
1968 . . . . .	88,788	72,848	11,984	20,919	9,749	204,289
1967 . . . . .	79,872	64,304	10,461	19,145	8,597	182,379

(a) Includes funds expended by various government departments and other bodies in respect of universities but not controlled by the universities. (b) In the case of endowments, only income from property and other investments of these endowments is included. The treatment of donations depends on the terms of the gift, etc. When the capital sum is specified to be expended over several years, only the portion of the capital sum allocated to each year is shown as income in that year, but if the capital sum is available for spending without limitation as to time, the full amount is recorded as income in the year it is received, irrespective of whether it is spent in that year or not. The capital value of land and buildings donated to the universities is not recorded as income, unless these properties are sold, in which case the amounts realised are included. (c) Excludes fees collected on behalf of student unions, adult education fees, ad hoc course fees and public examination fees.

## UNIVERSITIES: EXPENDITURE, 1971

(\$'000)

	Teaching and research	Administration and general overhead	Libraries	Buildings, premises, grounds	Sundry auxiliary expenditure	Total expenditure
New South Wales . . . . .	58,743	8,655	5,105	21,397	5,971	99,870
Victoria . . . . .	40,557	6,039	3,650	18,031	4,443	72,720
Queensland . . . . .	19,739	2,426	1,489	7,514	818	31,987
South Australia . . . . .	15,245	1,774	1,380	6,278	729	25,405
Western Australia . . . . .	10,468	1,341	829	3,207	1,381	17,227
Tasmania . . . . .	4,298	599	455	1,260	278	6,891
Australian Capital Territory . . . . .	21,678	2,958	1,335	6,548	3,512	36,030
<b>Australia—1971 . . . . .</b>	<b>170,729</b>	<b>23,793</b>	<b>14,242</b>	<b>64,235</b>	<b>17,132</b>	<b>290,129</b>
1970 . . . . .	151,879	20,563	11,957	50,606	13,518	248,524
1969 . . . . .	124,806	17,672	10,375	48,134	12,046	213,034
1968 . . . . .	119,394	15,563	9,129	51,823	11,737	207,645
1967 . . . . .	106,386	13,298	7,915	48,061	9,056	184,714



### Colleges of advanced education

The Committee on the Future of Tertiary Education in Australia recommended that the tertiary level of education in Australia outside the universities should be further expanded and developed. As a result, the Commonwealth Advisory Committee on Advanced Education was set up in 1965. The Advisory Committee was replaced in 1971 by the Australian Commission on Advanced Education which continues to advise the Australian Government on the development of colleges of advanced education which provide training with a vocational emphasis.

In some States the colleges have been developed from existing technological institutions. The diploma-awarding schools or sections of technical institutions were generally separated from the trade, certificate and other sections of technical education, and were developed as colleges of advanced education receiving Commonwealth financial assistance. New colleges of advanced education have also been established.

Many colleges cater for a number of vocations in fields such as accountancy, architecture, art, applied sciences, building, business administration, data processing, domestic science, engineering, librarianship, medical laboratory technology, metallurgy, nutrition, pharmacy, teacher education and textile sciences. Other colleges of advanced education are specialist institutions, such as agricultural colleges, art schools, conservatoria of music, schools of paramedical studies and colleges offering courses in forestry and horticulture.

Administrative developments have occurred in the States to co-ordinate the activities of colleges of advanced education. Advanced Education Boards have been established in New South Wales, Queensland and South Australia. In Victoria, there is the Victoria Institute of Colleges. Tasmania has a Council of Advanced Education. In some States provision is also being made for co-ordination of all tertiary education, for example, by the establishment of the Higher Education Authority in New South Wales and the Tertiary Education Commission in Western Australia.

An Australian Council on Awards in Advanced Education has been established by joint action of the six States and the Commonwealth. One of the functions of the Council is to promote consistency throughout Australia in the nomenclature and standards used for awards in advanced education. It aims to do this by consultation between the States and Commonwealth accrediting agencies in the field of advanced education.

Further information about the development of colleges of advanced education can be found in the reports of the Australian Commission on Advanced Education and its predecessor, the Commonwealth Advisory Committee on Advanced Education, in particular the First Report, 1967-69, the Second Report, 1970-72, and the Third Report, 1973-75. Details of the maximum Commonwealth grants for the development of the colleges are given on page 670.

The following statistics refer to the operative institutions listed in the States Grants (Advanced Education) Act for 1970-72 as colleges of advanced education and the Canberra College of Advanced Education.

#### COLLEGES OF ADVANCED EDUCATION: FIRST ENROLMENTS BY FIELD OF STUDY, STATES AND A.C.T., 1972

Field of study	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Australia		
								Males	Females	Persons
Agriculture . . . . .	195	138	103	67	36	..	..	474	65	539
Applied sciences . . . . .	98	879	337	125	249	8	215	1,636	275	1,911
Art and design . . . . .	136	898	..	75	176	53	..	620	718	1,338
Building, surveying and architecture . . . . .	167	504	111	180	157	42	..	1,030	131	1,161
Commercial and business studies . . . . .	1,038	3,003	643	497	1,179	98	311	5,847	922	6,769
Engineering and technology . . . . .	424	1,839	275	301	361	64	..	3,238	26	3,264
Liberal studies . . . . .	25	857	..	81	603	22	171	811	948	1,759
Music . . . . .	26	..	34	..	..	11	..	22	49	71
Para-medical . . . . .	329	601	80	168	201	55	..	401	1,033	1,434
Teacher education . . . . .	975	..	267	..	..	331	259	630	1,202	1,832
Total	1972	3,413	8,719	1,850	1,494	2,962	956	14,709	5,369	20,078
	1971	2,544	8,019	1,462	1,501	2,329	961	13,030	4,281	17,311

## COLLEGES OF ADVANCED EDUCATION: TOTAL ENROLMENTS, BY TYPE OF ENROLMENT AND FIELD OF STUDY, STATES AND A.C.T., 1972

Field of study	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Australia		
								Males	Females	Persons
FULL-TIME										
Agriculture . . . . .	355	269	272	93	65	..	..	946	108	1,054
Applied sciences . . . . .	92	1,197	517	129	261	3	202	2,016	385	2,401
Art and design . . . . .	310	1,563	..	217	260	88	..	1,159	1,279	2,438
Building, surveying and architecture . . . . .	74	593	..	215	282	87	..	1,088	163	1,251
Commercial and business studies . . . . .	371	2,984	363	282	676	30	171	3,839	1,038	4,877
Engineering and technology . . . . .	203	3,500	573	366	498	41	..	5,149	32	5,181
Liberal studies . . . . .	23	560	..	120	466	18	157	568	776	1,344
Music . . . . .	199	..	97	..	..	26	..	95	227	322
Para-medical . . . . .	607	1,082	150	325	369	75	..	655	1,953	2,608
Teacher education . . . . .	1,788	..	263	..	..	836	331	898	2,320	3,218
Total enrolments —1972	4,022	11,748	2,235	1,747	2,877	1,204	861	16,413	8,281	24,694
1971	2,403	10,605	1,719	1,766	2,129	609	544	13,847	5,928	19,775
Number of students(a)—1972	4,015	11,748	2,235	1,747	2,868	1,204	861	16,404	8,274	24,678
1971	2,403	10,605	1,719	1,766	2,129	609	544	13,847	5,928	19,775
PART-TIME										
Agriculture . . . . .	..	31	4	..	3	..	..	35	3	38
Applied sciences . . . . .	278	1,377	292	176	321	56	406	2,569	337	2,906
Art and design . . . . .	14	678	..	49	159	55	..	504	451	955
Building, surveying and architecture . . . . .	453	852	444	238	216	3	..	2,074	132	2,206
Commercial and business studies . . . . .	1,759	4,645	1,026	1,300	1,500	243	579	10,285	767	11,052
Engineering and technology . . . . .	1,018	2,627	477	565	548	152	..	5,365	22	5,387
Liberal studies . . . . .	22	1,029	..	110	550	4	197	1,011	901	1,912
Music . . . . .	2	..	1	..	..	7	..	5	5	10
Para-medical . . . . .	105	313	95	106	80	52	..	284	467	751
Teacher education . . . . .	393	..	4	..	..	35	64	319	177	496
Total enrolments —1972	4,044	11,552	2,343	2,544	3,377	607	1,246	22,451	3,262	25,713
1971	3,339	10,396	2,086	2,476	2,980	826	1,089	20,529	2,663	23,192
Number of students(a)—1972	4,044	11,552	2,343	2,544	3,212	607	1,246	22,323	3,225	25,548
1971	3,339	10,396	2,086	2,476	2,980	826	1,089	20,529	2,663	23,192
EXTERNAL										
Agriculture . . . . .	..	2	..	..	1	..	..	3	..	3
Applied sciences . . . . .	..	36	..	..	63	..	..	86	13	99
Art and design . . . . .	..	..	..	..	37	..	..	17	20	37
Building, surveying and architecture . . . . .	..	30	..	..	12	..	..	40	2	42
Commercial and business studies . . . . .	290	350	..	..	418	..	..	981	77	1,058
Engineering and technology . . . . .	..	35	..	..	11	..	..	45	1	46
Liberal studies . . . . .	..	125	..	..	179	..	..	197	107	304
Para-medical . . . . .	..	261	..	..	6	..	..	99	168	267
Teacher education . . . . .	132	..	..	..	..	..	..	47	85	132
Total enrolments —1972	422	839	..	..	727	..	..	1,515	473	1,988
1971	94	724	..	..	566	..	..	1,084	300	1,384
Number of students(a)—1972	422	839	..	..	693	..	..	1,487	467	1,954
1971	94	724	..	..	566	..	..	1,084	300	1,384
ALL ENROLMENTS										
Agriculture . . . . .	355	302	276	93	69	..	..	984	111	1,095
Applied sciences . . . . .	370	2,610	809	305	645	59	608	4,671	735	5,406
Art and design . . . . .	324	2,241	..	266	456	143	..	1,680	1,750	3,430
Building, surveying and architecture . . . . .	527	1,475	444	453	510	90	..	3,202	297	3,499
Commercial and business studies . . . . .	2,420	7,979	1,389	1,582	2,594	273	750	15,105	1,882	16,987
Engineering and technology . . . . .	1,221	6,162	1,050	931	1,057	193	..	10,559	55	10,614
Liberal studies . . . . .	45	1,714	..	230	1,195	22	354	1,776	1,784	3,560
Music . . . . .	201	..	98	..	..	33	..	100	232	332
Para-medical . . . . .	712	1,656	245	431	455	127	..	1,038	2,588	3,626
Teacher education . . . . .	2,313	..	267	..	..	871	395	1,264	2,582	3,846
Total enrolments —1972	8,488	24,139	4,578	4,291	6,981	1,811	2,107	40,379	12,016	52,395
1971	5,836	21,725	3,805	4,242	5,675	1,435	1,633	35,460	8,891	44,351
Number of students(a)—1972	8,481	24,139	4,578	4,291	6,773	1,811	2,107	40,214	11,966	52,180
1971	5,836	21,725	3,805	4,242	5,675	1,435	1,633	35,460	8,891	44,351

(a) Adjusted for students enrolled for more than one advanced level course.

**COLLEGES OF ADVANCED EDUCATION: TEACHING STAFF, BY SUBJECT FIELD  
STATES AND A.C.T.(a), 1972**

(Advanced level work of full-time and part-time teaching staff expressed in equivalent full-time units and rounded to whole numbers)

	<i>N.S.W.(b)</i>	<i>Vic.</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>
<b>FULL-TIME STAFF</b>						
Agriculture . . . . .	74	43	11	7	..	..
Applied sciences . . . . .	102	336	38	56	8	31
Art and design . . . . .	23	179	20	20	15	..
Building, surveying and architecture .	20	59	25	32	4	..
Commercial and business studies .	49	242	32	79	7	24
Engineering and technology . .	44	376	93	69	18	..
Liberal studies . . . . .	10	120	18	46	..	34
Music . . . . .	19	..	..	..	9	..
Para-medical . . . . .	31	83	32	43	10	..
Teacher education . . . . .	19	..	..	..	44	20
<i>Total—1972 . . . . .</i>	<i>(b)486</i>	<i>1,438</i>	<i>267</i>	<i>352</i>	<i>115</i>	<i>109</i>
1971 . . . . .	339	1,293	249	309	88	77
<b>PART-TIME STAFF</b>						
Agriculture . . . . .	1	4	2	..	..	..
Applied sciences . . . . .	14	48	4	8	2	6
Art and design . . . . .	27	23	6	8	5	..
Building, surveying and architecture .	6	27	3	8	..	..
Commercial and business studies .	13	46	6	17	5	6
Engineering and technology . .	10	42	5	5	4	..
Liberal studies . . . . .	3	20	6	7	1	16
Music . . . . .	18	..	..	..	3	..
Para-medical . . . . .	7	6	15	6	1	..
Teacher education . . . . .	1	..	..	..	7	3
<i>Total—1972 . . . . .</i>	<i>100</i>	<i>215</i>	<i>46</i>	<i>59</i>	<i>27</i>	<i>31</i>
1971 . . . . .	90	165	47	36	42	15
<b>ALL STAFF</b>						
Agriculture . . . . .	75	46	13	7	..	..
Applied sciences . . . . .	116	384	41	64	10	37
Art and design . . . . .	50	203	26	28	20	..
Building, surveying and architecture .	26	86	28	40	4	..
Commercial and business studies .	62	288	37	96	12	30
Engineering and technology . .	55	418	97	74	22	..
Liberal studies . . . . .	13	141	24	53	1	50
Music . . . . .	37	..	..	..	12	..
Para-medical . . . . .	38	89	46	49	11	..
Teacher education . . . . .	20	..	..	..	51	23
<i>Total—1972 . . . . .</i>	<i>(b)586</i>	<i>1,654</i>	<i>313</i>	<i>411</i>	<i>142</i>	<i>140</i>
1971 . . . . .	428	1,458	297	345	130	92

(a) Statistics comparable with other States are not available for Queensland. In 1972 the number of staff teaching at Queensland colleges of advanced education was 396 full-time and 546 part-time. These statistics include staff engaged in teaching in courses which were not at an advanced level. (b) Includes 95 full-time teaching staff at the Mitchell College of Advanced Education for whom details of subject field are not available.



## Teacher education

State education departments recruit most prospective teachers for government service from students leaving school after completion of secondary education. Each department offers training awards annually on the basis of academic merit and personal suitability. These awards cover the cost of a teacher training course (which may include university studies) and provide a living allowance. Students are usually required to enter into an agreement to serve for a specified number of years in the government schools of the State where they have trained. In some States intending teachers can obtain a scholarship at the first public secondary examination to enable them to complete teachers college entrance requirements.

Until now, State education departments have conducted teachers colleges to train teachers for government schools. However, significant developments have occurred since 1970. Some teachers colleges have either been incorporated within colleges of advanced education or have themselves become colleges of advanced education providing courses other than teacher education. From 1973 the other government teachers colleges will progressively become independent of State education departments. In most States the activities of the autonomous teachers colleges will be co-ordinated by the State advanced education authorities referred to on page 653; in two states there will be new statutory authorities to co-ordinate the activities of teachers colleges—in Victoria the State College of Victoria and in Western Australia the Teacher Education Authority. This development in the organisation of teachers colleges will be accompanied by an important change in the financing of the colleges. Commonwealth financial assistance to the States for teachers colleges has been in respect of building projects; for details of Commonwealth grants see page 671. From July 1973 Commonwealth financial assistance will be extended to cover the whole range of the teachers colleges activities, as in the case with universities and colleges of advanced education; this assistance will be provided under the advanced education legislation.

In 1972 there were 9 government teachers colleges in New South Wales, 14 in Victoria, 4 in Queensland, 5 in South Australia, 5 in Western Australia. Excluding kindergarten teachers colleges (see page 659) there were 7 private colleges in New South Wales, 6 in Victoria, 2 in Queensland and 1 in the Australian Capital Territory.

### Teachers for government schools

*Training of teachers.* Most teachers for government primary schools are trained in teachers colleges. Intending secondary school teachers either obtain a university degree with additional professional teaching training such as Diploma in Education, a diploma or certificate from a teachers college or follow a secondary teaching course at a college of advanced education. Teachers of specialist subjects, such as music, art, manual arts, domestic science and commercial subjects, receive from two to five years training which varies according to the institution concerned and the type of school in which the teacher is to serve. Where the specialist course is given at an institution other than the teachers college—e.g. at a university, college of advanced education, technical college or conservatorium of music, students are generally required to attend teachers college or university lectures in education, and in some cases the specialist course is followed by a year of professional training. Courses designed to train physical education teachers are offered in universities in some States and in at least one teachers college in every State.

Training for teachers of agricultural subjects in secondary schools consists of either an agricultural college diploma or a university degree course together with professional teacher training. Teachers of technical subjects in secondary schools may be trained in manual or industrial arts courses of two to four years duration at teachers colleges, colleges of advanced education, technical colleges or, in one State, at a university.

At several Australian universities, students wishing to take up teaching as a profession can receive their professional training along with the study of their teaching subjects as part of a first degree course. Courses of a similar nature are available at some colleges of advanced education where teacher education courses are integrated into the general teaching of the college.

The following table shows students undertaking teacher education courses in government and non-government colleges from 1969 to 1972. The figures exclude enrolments of practising and newly qualified teachers, and those teachers at short refresher courses and summer schools. They also exclude non-award students enrolled in part-time courses at the Technical Teachers College, Victoria.

**TEACHER EDUCATION(a): ENROLMENTS BY AFFILIATION AND SEX  
1969 TO 1972**

	1969		1970		1971		1972		
	Males	Females	Males	Females	Males	Females	Males	Females	Persons
<b>DEPARTMENTAL STUDENTS</b>									
New South Wales . . . .	3,650	6,344	4,321	7,226	5,501	9,403	6,829	10,782	17,611
Victoria(b) . . . . .	4,590	7,157	4,924	8,195	(c)5,132	8,701	5,746	9,596 (c)	15,342
Queensland . . . . .	966	2,655	1,128	2,797	1,307	3,051	1,672	3,362	5,034
South Australia . . . .	1,484	2,299	1,571	2,701	1,768	3,014	1,956	3,354	5,310
Western Australia . . .	797	1,452	832	1,680	885	1,944	1,079	2,281	3,360
Tasmania . . . . .	355	769	422	776	470	862	479	889	1,368
<i>Total</i> . . . . .	<i>11,842</i>	<i>20,676</i>	<i>13,198</i>	<i>23,375</i>	<i>15,063</i>	<i>26,975</i>	<i>17,761</i>	<i>30,264</i>	<i>48,025</i>
Courses for primary teaching .	2,840	10,269	3,251	11,184	3,577	12,603	4,226	13,946	18,172
Courses for secondary teaching(b)	8,741	10,061	9,923	12,146(c)	11,463	14,334	13,535	16,316(c)	29,851
Courses not classifiable as primary or secondary teaching . .	261	346	24	45	23	38	..	2	2
<i>Total</i> . . . . .	<i>11,842</i>	<i>20,676</i>	<i>13,198</i>	<i>23,375</i>	<i>15,063</i>	<i>26,975</i>	<i>17,761</i>	<i>30,264</i>	<i>48,025</i>
Enrolled at government teachers college and not enrolled elsewhere . . . . .	4,692	12,249	5,198	13,496	(c)6,306	15,062	7,137	15,938(c)	23,075
Enrolled at university or other institution—									
Also enrolled at teachers college . . . . .	6,101	7,134	6,483	8,005	6,328	8,365	7,391	9,200	16,591
Not enrolled at teachers college . . . . .	1,049	1,293	1,517	1,874	2,429	3,548	3,233	5,126	8,359
<i>Total</i> . . . . .	<i>11,842</i>	<i>20,676</i>	<i>13,198</i>	<i>23,375</i>	<i>15,063</i>	<i>26,975</i>	<i>17,761</i>	<i>30,264</i>	<i>48,025</i>
<b>PRIVATE STUDENTS</b>									
Enrolled at government teachers college . . . . .	214	373	227	327	169	386	273	669	942
Enrolled at private teachers college . . . . .	394	1,190	366	1,586	417	1,732	490	1,657	2,147
<i>Total</i> . . . . .	<i>608</i>	<i>1,563</i>	<i>593</i>	<i>1,913</i>	<i>586</i>	<i>2,118</i>	<i>763</i>	<i>2,326</i>	<i>3,089</i>
Courses for primary teaching .	310	1,217	295	1,587	301	1,822	393	1,894	2,287
Courses for secondary teaching .	274	284	273	270	271	196	332	243	575
Courses not classified as primary or secondary teaching . .	24	62	25	56	14	100	38	189	227
<i>Total</i> . . . . .	<i>608</i>	<i>1,563</i>	<i>593</i>	<i>1,913</i>	<i>586</i>	<i>2,118</i>	<i>763</i>	<i>2,326</i>	<i>3,089</i>
<b>ALL STUDENTS</b>									
Courses for primary teaching .	3,150	11,486	3,546	12,771	3,878	14,425	4,619	15,840	20,459
Courses for secondary teaching .	9,015	10,345	10,196	12,416(c)	11,734	14,530	13,867	16,559(c)	30,426
Courses not classifiable as primary or secondary teaching . .	285	408	49	101	37	138	38	191	229
<i>Total</i> . . . . .	<i>12,450</i>	<i>22,239</i>	<i>13,791</i>	<i>25,288</i>	<i>15,649</i>	<i>29,093</i>	<i>18,524</i>	<i>32,590</i>	<i>51,114</i>

(a) Excludes 877 students enrolled at kindergarten teachers colleges in 1969; 977 in 1970; 1,069 in 1971; and 1,216 in 1972. (b) Includes students at Technical Teachers College in Victoria gaining industrial experience, who were previously excluded.

(c) Includes 366 males undertaking a two year part-time course at the Technical Teachers College in 1971, and 400 in 1972.

The following table shows departmental students enrolled in the first year of their course and also those enrolled in the final year of their course. The figures exclude enrolments in one year courses which are mainly extension courses for students who have qualified as teachers.

DEPARTMENTAL STUDENTS ENROLLED IN THE FIRST  
AND IN THE FINAL YEAR OF A COURSE, 1972

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australia		
							Males	Females	Persons
Enrolled in the first year of a course	5,457	(a)5,250	1,961	1,851	1,409	352	6,101	10,179	16,280
Enrolled in the final year of a course	4,075	(a)3,497	1,023	1,255	931	395	3,734	7,442	11,176

(a) Includes 217 and 183 males who are undertaking a two-year part-time course at the Technical Teachers College, for the first year, and the final year of a course, respectively.

*In-service training.* In-service training in Australia is directed chiefly towards keeping teachers abreast of developments and adding to their basic training. In-service training usually takes the form of short courses held sometimes during vacations, sometimes during school-time or in the evening. In some States in-service courses for teachers in remote areas are provided by correspondence and there are also in-service courses for special groups of teachers such as headmasters or teachers in one-teacher schools. In addition, district inspectors are responsible for organising short conferences of teachers, where professional topics are discussed. Education departments encourage teachers to pursue university courses and in some States pay the cost of courses undertaken by selected teachers.

*Status of teachers.* Most teachers in government schools are permanent public servants and have security of tenure, superannuation rights, and the right of appeal in matters of promotion. The centralised education systems and the general policy of providing fully trained teachers for both city and country areas means that teachers are subject to transfer to any part of the State in which they serve.

#### Training of technical teachers

To preserve links with industry and trade practice, schemes have been developed for the recruitment of specialist tradesmen as teachers and for their training in educational method and teaching techniques. In Victoria, the Technical Teachers College provides training for students with appropriate diploma or trade qualifications and suitable industrial experience. In New South Wales, technical college lectures and tradesmen-teachers receive an in-service course of teacher training in general education theory and training method, while correspondence courses and visiting lecturers assist the newly appointed tradesman-teacher in country colleges. Variations of this scheme are in operation in other States. Many technical teachers, principally of academic, commercial and domestic science subjects, hold trained teachers certificates from teachers colleges.

#### Training of non-government school teachers

Teachers for non-government schools receive their training in a number of ways. The Roman Catholic Church staffs both its primary and secondary schools, as far as possible, with members of religious orders. In recent years there has been an increase in the number of lay teachers being employed in Catholic schools, and training of students to become lay junior-secondary or primary teachers has been undertaken by Catholic teachers colleges.

Other non-government schools tend to recruit their staff from teachers who have already obtained qualifications in Australia or overseas. In New South Wales and Victoria, non-government school authorities offer courses designed specially for teachers in their schools. Non-government schools also recruit university graduates, who are then given professional guidance by senior members of the school staff. Private students may enrol at government teachers colleges on payment of a fee, but the number of places available is limited. The Commonwealth Government provides financial assistance to the States for approved building projects provided that the colleges admit a number of private students. Some teacher trainees who will eventually teach in non-government schools train in this way.



The following table shows, for non-government teachers colleges, the number of students enrolled, and the number in the final year of their courses.

**NON-GOVERNMENT TEACHERS COLLEGES: ENROLMENTS(a), AUSTRALIA, 1972**

	<i>Enrolments</i>			<i>Students in final year of a course</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
For primary teaching . . .	241	1,526	1,767	70	364	434
For secondary teaching . . .	221	65	286	51	31	82
Not classifiable as primary or secondary teaching . . .	28	66	94	3	24	27
<b>Total . . . . .</b>	<b>490</b>	<b>1,657</b>	<b>2,147</b>	<b>124</b>	<b>419</b>	<b>543</b>

(a) These figures include students taking university degree courses whether instruction is given at the university or the college. They exclude students at kindergarten teachers colleges.

During vacations many non-government teachers attend in-service training courses organised by education departments. In recent years vacation courses have been provided by bodies other than education departments for teachers from both government and non-government schools. For example, an independent body, the Science Foundation for Physics within the University of Sydney, has provided such courses for teachers of science in secondary schools in New South Wales.

For details of Commonwealth financial assistance to teachers colleges *see* page 672.

#### **Pre-school teachers colleges**

With the exception of Tasmania, each State has a pre-school or kindergarten teacher/training college which provides a three-year diploma course for teachers of children in the 3-8 year age group. In Tasmania and the Australian Capital Territory, pre-school teacher training is provided by three-year courses at the Tasmanian College of Advanced Education and the Canberra College of Advanced Education, respectively.

In Victoria, the Melbourne Kindergarten Teachers College is an autonomous institution administered by an independent college council. In New South Wales, Queensland, South Australia and Western Australia the colleges have traditionally been the responsibility of the Kindergarten Union in each of those States; it is expected that in future the pre-school teachers colleges in at least some of these States will gain autonomy or become associated with other tertiary institutions.

In 1972 there were 1,216 students (all female) enrolled for diploma courses at kindergarten teachers colleges, of whom 301 were in their final year.

The Commonwealth Government has provided grants for building projects at pre-school teachers colleges; for details of this financial assistance *see* page 672. From July 1973 the Commonwealth Government will provide grants, under the advanced education legislation, for the capital development and running costs of pre-school teachers colleges.

### **Technical education**

Australian technical colleges offer training in all the major industrial skills and in a wide variety of commercial, artistic and domestic occupations. The main types of courses are described in Year Book No. 55, pages 498 and 499.

The following is an outline of the administration of, and some recent developments in, technical education in each State.

*New South Wales* has a separate State Department of Technical Education under the Minister for Education. A Technical Education Council advises the Minister, and there is also an advisory council or committee for each technical college, established on a local basis to assist the principal in determining the needs of his own area. These bodies include representatives from industry and commerce.

*Victoria.* The larger colleges are controlled by their own councils and are affiliated with the Victoria Institute of Colleges. These colleges are at present responsible to the Victoria Institute of Colleges for the development and operation of tertiary courses and to the Education Department for the conduct of non-tertiary courses.

Government-controlled colleges are administered by the Technical Education Division of the Education Department. In general, diploma awarding schools or sections of technical institutions are in the process of being separated from the trade, certificate and other sections of technical education, and are being developed as colleges of advanced education. They are now receiving Commonwealth assistance for this purpose.

*Queensland.* Technical colleges in Queensland are administered by a branch of the State Education Department. This branch also administers the Technical Correspondence School which provides instruction in many courses to students in remote areas. Those institutions offering diploma courses in technological fields are now colleges of advanced education, which function as autonomous institutions and receive Commonwealth financial assistance. At present, they also offer technical courses at the certificate level.

*South Australia.* Technical colleges are administered by the State Department of Further Education. For a number of years, the South Australian Institute of Technology has offered courses which lead to a level of qualification below that of full professional status. The courses provide for those employed in the area between the tradesman and the professionally qualified person.

*Western Australia.* Technical schools, colleges and education centres are administered by a division of the Western Australian Education Department and offer a wide range of technician and vocational courses related to commerce, industry, agriculture and the home. In addition, the Technical Educational Division offers study programs for students undertaking the examinations of other examining bodies, as well as general education and leisure-type activities. The Technical Extension Service of the Division offers a wide range of correspondence instruction.

*Tasmania.* Technical education is controlled by the Tasmanian Education Department through a Board of Technical Education whose chief administrative officer is the Director of the Technical Education Branch. There are technical colleges in five centres: Hobart, Launceston, Devonport, Burnie, and Queenstown. The Tasmanian College of Advanced Education is being developed and since January 1972 has taken over all diploma courses. Technical colleges will in future be concerned with apprenticeship/trade, post-trade and technical courses, and commercial and general courses at the certificate level.

The numbers of colleges, teachers and enrolments in each State and Territory during 1971, and for Australia for the period 1967 to 1971 are given in the following table. The statistics include senior technical schools and colleges, institutes of technology and colleges of advanced education providing technical education, and their teachers and students at all levels. Whilst details for colleges of advanced education are included, the basis of collection differs from that used for advanced level courses, statistics of which are given on pages 653-5.

TECHNICAL EDUCATION: COLLEGES, TEACHERS AND ENROLMENTS  
STATES AND TERRITORIES, 1971

	Colleges	Teachers			Students enrolled		
		Full-time	Part-time	Total	Males	Females	Persons
New South Wales(a)(b)(c)(d)	62	2,120	4,922	7,042	108,917	60,289	169,206
Victoria(e)	98	4,997	3,236	8,233	n.a.	n.a.	67,192
Queensland(d)	18	800	1,286	2,086	27,721	4,300	32,021
South Australia(d)	29	663	1,456	2,119	n.a.	n.a.	43,398
Western Australia(d)(f)(g)	87	1,099	2,009	3,108	43,472	26,924	70,396
Tasmania	7	189	565	754	5,972	1,905	7,877
Northern Territory	2	20	241	261	2,340	3,463	5,803
<b>Australia—1971</b>	<b>303</b>	<b>9,888</b>	<b>13,715</b>	<b>23,603</b>	<b>n.a.</b>	<b>n.a.</b>	<b>395,893</b>
1970	292	9,176	12,294	21,470	n.a.	n.a.	387,812
1969	296	8,826	11,615	20,441	n.a.	n.a.	398,578
1968	275	9,041	11,888	20,929	n.a.	n.a.	389,309
1967	230	8,071	11,290	19,361	n.a.	n.a.	376,915

(a) Students enrolled represent gross enrolments, no allowance having been made for students enrolled in more than one course. (b) Includes Australian Capital Territory. Gross enrolments at Canberra Technical College were 7,512 in 1971; 6,877 in 1970; 6,105 in 1969; 5,956 in 1968; and 5,578 in 1967. (c) Figures include teachers and students at 137 associated centres and 4 mobile units. (d) Includes correspondence course teachers and students. (e) Prior to 1969 statistics included tertiary students and teachers teaching tertiary courses at colleges affiliated with the Victoria Institute of Colleges, and the Emily McPherson College. Teachers include those at both senior and junior technical colleges. (f) Teachers represent number of teaching positions. (g) Country extension centres are now counted separately.

Commonwealth assistance to technical education is shown on page 671.

### **Agricultural and forestry education**

There are agricultural faculties in universities in all States. Ten of the faculties provide various degree courses in agricultural science and agricultural economics and there are also three faculties of veterinary science in New South Wales, Victoria and Queensland. Besides undergraduate courses, these faculties collectively provide a wide range of post-graduate diploma courses as well as facilities for training for higher degrees. A fourth veterinary science school in Western Australia will enrol its first students in 1975.

At least one government agricultural college in each State, except Tasmania, is a college of advanced education. The primary role of these colleges is to train students for professional extension work or technology roles in the agricultural services. An exception is Muresk in Western Australia which, like Marcus Oldham (an independent college in Victoria), places emphasis on farm management. The new Orange Agricultural College in New South Wales will also concentrate on farm management training.

At the sub-tertiary level, other colleges in New South Wales, Victoria and Queensland teach the principles and practices of agriculture and farm management to those intending to take up farming as a career. A similar scheme is proposed for Tasmania. There is also a wide range of technical training available.

Training in forestry at undergraduate and post-graduate levels, is provided by the Department of Forestry in the Faculty of Science within the Australian National University. A four-year degree course is offered, but the first year of this course may be undertaken, by arrangement, at any other university. The University of Melbourne provides a four-year degree course in forestry and at the Victorian School of Forestry, Creswick, a three-year diploma course can be taken.

### **Other education**

#### **Conservatoria of music, schools of art, etc.**

In addition to the conservatoria of music which are attached to universities or which constitute separate colleges of advanced education, there is the Canberra School of Music which offers a four-year full-time diploma course of theoretical and practical studies. Some schools of art have been developed into colleges of advanced education or included as departments in such colleges, and offer courses in printing, sculpture, and design as well as in basic art.

#### **Educational training in the defence services**

Each of the three armed forces maintains institutions for the training of officers. The Royal Australian Naval College, Jervis Bay, Australian Capital Territory, became an affiliated college of the University of New South Wales in 1968. Selected matriculated cadets complete first year degree studies in science, engineering or surveying at the College, and subsequent years of degree studies at the University. The Royal Military College, Duntroon, Australian Capital Territory, became an affiliated college of the University of New South Wales in 1968. The Royal Australian Air Force Academy, Point Cook, Victoria, has evolved from the Royal Australian Air Force College, which was established in 1948 as a tertiary training centre to provide a professional education for permanent officers of the Air Force. It is affiliated with the University of Melbourne and has adopted that University's Bachelor of Science course. The Academy is also permitted to present students for higher degrees in science and the degree of Doctor of Philosophy. Students may also proceed to the University of Sydney to take a degree in aeronautical engineering. The Australian Staff College and the Royal Australian Air Force Staff College provide one year courses for officers. Courses at the Australian Joint Services Staff College commenced in January 1970. The College provides higher training for selected Service officers, certain officers of the Commonwealth employed in Departments associated with defence matters and selected students from other countries. College courses cover political, defence and economic subjects and are of six months duration. Educational training is also provided in the apprentice training schools conducted by each of the Services, and in the Royal Australian Navy School for Junior Recruits. The Royal Australian Air Force School of Languages, Point Cook, Victoria, conducts courses in French and Asian languages. In 1972 there were 47 students enrolled, of whom 8 were Royal Australian Air Force personnel. For further information on Service training and educational facilities, *see* Chapter 4, Defence.

The following table shows the number of officers, officer cadets and other ranks enrolled in the training establishments mentioned above.



**SERVICE ESTABLISHMENTS PROVIDING EDUCATIONAL TRAINING  
AUSTRALIA, 1972**

<i>Establishment</i>	<i>Enrolments</i>	<i>New entrants during year</i>	<i>Number completing course during year</i>
<b>OFFICERS AND OFFICER CADETS(a)</b>			
Staff Colleges—			
Australian Staff College . . .	72	72	71
Joint Services Staff College . . .	55	55	55
Royal Australian Air Force Staff College	30	30	29
Officer cadets—			
Royal Australian Navy—			
Royal Naval College . . .	171	65	34
H.M.A.S. <i>Lonsdale</i> . . .	17	10	2
Royal Military College . . .	355	123	60
Royal Australian Air Force(b)—			
R.A.A.F. Academy . . .	106	32	18
<b>APPRENTICES AND OTHER RECRUITS(c)</b>			
Royal Australian Navy—			
Naval artificer apprentices . . .	265	110	157
School of Technical Training . . .	33	22	11
Junior recruits . . .	776	776	559
Topmen scheme . . .	78	37	46
Academic Instructors(d) . . .	4	2	..
Army Apprentice School . . .	570	13	281
Royal Australian Air Force—			
School of Technical Training . . .	369	157	100
School of Radio . . .	115	48	29

(a) Includes 367 cadets enrolled for university courses and 132 enrolled at an institute of technology. (b) Excludes 132 R.A.A.F. Diploma Squadron cadets enrolled at colleges of advanced education. (c) Includes 115 apprentices enrolled at a technical college or institute of technology. (d) Non-commissioned officers engaged on part-time instructional duties and part-time study at teachers training college.

### **The Australian School of Pacific Administration**

The Australian School of Pacific Administration, which used to train students in the various aspects of service and administration in Commonwealth Territories including teaching, is now an important centre concentrating on administrative and specialised training to prepare Papua New Guinean public servants. For details of its new role, see Chapter 28, The Territories of Australia.

Because of a change in role, most of the existing training activities for both Papua New Guinea and the Northern Territory undertaken at the School of Pacific Administration are being phased out. In 1972, the School trained 53 Australians doing final year teacher training before commencing service in Papua New Guinea and the Northern Territory. The School also undertook training of Australians for service as patrol officers in Papua New Guinea and Aboriginal welfare officers in the Northern Territory.

### **Australian Administrative Staff College**

Opened in 1957, the Australian Administrative Staff College is a private organisation working in close co-operation with government and other public bodies, the armed services, and the trade union movement. It was founded, and is owned, by a large group of leading Australian companies and has its permanent premises at Mount Eliza, near Melbourne. The College conducts residential courses for administrators to further the study of the problems which arise in managerial work.

### **Technical training by government departments**

Although most needs of departments for trained staff are met by apprenticeship schemes and other technical college courses and by the universities, some departments provide training which is not available elsewhere. The most important field for which such training is provided is the training of telephone, telegraph, radio, and television technicians by the Postmaster-General's Department.

### Post-school study courses

As part of the quarterly population survey (*see* Chapter 20, Employment and Unemployment) a survey was conducted in all States and Territories in August 1968 to obtain estimates of persons enrolled for courses of study or training outside school. The results of the survey supplement data about enrolments collected from schools and other institutions, and present a general indication of post-school education. For details of the survey *see* Year Book No. 56, pages 640–44.

### Migrant education

The Department of Immigration is responsible for migrant education as part of its responsibility for migrant integration generally. Migrant education includes not only the teaching of English but also counselling and instruction to prepare migrants for life in their new environment and to assist them to integrate more quickly into the Australian community.

Following a major review of migrant education early in 1970, increasing emphasis has been placed upon accelerated and more specialised forms of instruction and on developing courses designed to meet the varying needs of individual groups of migrants. The program now includes full-time intensive courses for professional and other well-educated migrants, accelerated courses particularly suited to workers and migrant women, special courses for migrants in industry, daytime classes for migrant women and a special language program for migrant children in government and independent schools.

### The child migrant education program

The child migrant education program involves the Australian Government in reimbursing government and non-government school authorities for the costs of teaching English to migrant children. Expenditure on this program was \$5.1 million in 1972–73 and is estimated to be \$8.4 million in 1973–74. The Government will also be providing \$2 million in 1973–74 to meet the cost of supplementary classroom accommodation where this is necessary to allow special migrant instruction to take place.

Courses in English are arranged in conjunction with State education departments, colleges of advanced education and other approved educational bodies. Advice on aspects of teaching English, co-operation in the arrangement of teacher training courses and the production of suitable teaching and learning materials is provided by the Department of Education.

The Australian Government allocates funds to the Intergovernmental Committee for European Migration which, in Greece, Italy, Germany and Austria, provides pre-embarkation class and correspondence instruction for intending migrants to Australia. The Department itself arranges language and orientation courses in Turkey, France and Yugoslavia and distributes a recorded introductory English language course in Finland. The Governments of Holland, Belgium and Spain assist with courses conducted in these countries. Language instruction is given by Departmental Education Officers on ships carrying significant numbers of non-English speaking migrants to Australia.

A radio/correspondence course in English is conducted in Australia in co-operation with the ABC and in May 1971 an educational television program was commenced by arrangement with Station Channel WIN 4 Wollongong.

The *Immigration (Education) Act* 1971 was introduced to give legislative authority for the ongoing program. The Act came into force on 12 May 1971.

### Adult education

The term 'adult education' as used in Australia refers mainly to non-vocational educational and cultural activities for adults. While the nature of the recognised adult education authorities varies from State to State, their major activities have many common features. Regular courses of lectures are organised on such topics as literature, music, drama, international affairs, languages, and crafts. Some authorities also organise discussion groups, festivals and summer schools, and provide special services for groups in remote areas. In 1960 an Australian Association of Adult Education was formed, and its first annual conference was held in Adelaide in 1961. The Association handles matters pertaining to adult education at a national level and arranges liaison with similar bodies in other countries.

One of the first bodies active in the field of adult education in Australia was the Workers' Educational Association, which formed associations in all States in 1913. Its aims were to bring the universities into closer relationship with the community in general and to provide for higher education in civic and cultural subjects. These associations have been superseded by Adult Education Boards or Councils set up by the State governments in Victoria, Queensland and Tasmania, and by the university in Western Australia. In the other two States, New South Wales and South Australia, the associations continue to co-operate with the universities in their extension work and are given direct grants by the governments concerned.

There are throughout Australia various other organisations which are active in the field of adult education. The World Education Fellowship, for example (*see below*), since its inception in Australia, has been interested in adult education.

### Overseas students

Information about overseas students in Australia is available from three statistical series. The Department of Education compiles statistics of *government sponsored overseas students* in Australia. The statistics of government sponsored students in institutions of higher learning are compiled from records held by that Department; those of other government sponsored students are estimates from information held by the Department of Foreign Affairs. In June 1972, there were 1,785 government sponsored overseas students in institutions of higher learning, and 597 other government sponsored students. These figures exclude some personnel of overseas armed forces taking courses at Australian Defence Colleges. Altogether, there were 2,382 government sponsored overseas students in Australia in 1972. Students under the Colombo Plan Technical Co-operation Scheme numbered 1,687. The largest numbers of government sponsored students came from Malaysia, Indonesia, South Vietnam, and Thailand.

The Department of Immigration prepares statistics of overseas students in Australia who have been admitted under the *Private Overseas Student Programme*. In 1972, there were 9,995 students (6,611 males and 3,384 females) undertaking courses or training in Australia under the Programme; 5,571 from Malaysia, 1,117 from Hong Kong, and 775 from Singapore. Courses chosen were mainly in engineering and building (1,814), economics and commerce (1,408), medicine (including paramedical) and dentistry (1,832), and general and school courses (2,101).

*Overseas students enrolled for advanced level courses* in Australian education institutions are enumerated annually. The institutions reported 8,080 enrolments in 1972, 6,297 at universities, 1,537 at colleges of advanced education and 246 at other institutions.

## Organisations associated with education

### Australian Council for Educational Research

The Australian Council for Educational Research, a non-government body, is engaged on educational research in a wide variety of fields, ranging from tertiary to pre-school education. It conducts surveys and inquiries, makes grants to approved educational investigators, serves as a centre for disseminating educational information, provides training for research workers, and standardises and distributes educational and psychological tests for use in Australia. Although this Council is an autonomous body, the Commonwealth and State governments give substantial financial support.

### World Education Fellowship

The World Education Fellowship is a world organisation of parents, educators and other citizens interested in the development of new educational practices. It was founded in London in 1915 and spread to Australia at the time of a regional conference held here in 1937. There are now sections in each State. Its Australia-wide journal *New Horizons in Education* is published twice a year.

### Australian College of Education

The Australian College of Education was formed in 1959. Its aims are to bring together leading teachers and administrators in every field of education, to raise the standard of the profession of education in Australia, to establish and proclaim fundamental educational values, and to recognise outstanding contributions to educational practice. Chapters of the College have been set up in all States, and several of the addresses and papers delivered at meetings of the College have been issued in published form.

## Commonwealth activities in education

### Fields of activity

Although education is primarily the responsibility of the States, the Commonwealth has instituted a number of measures of direct assistance to educational institutions and to students. It is responsible for public education in its own Territories and is engaged in educational activities incidental to its responsibilities in such areas as defence, external relations, immigration, and social services. Education in Commonwealth Territories is outlined in Chapter 28, *The Territories of Australia*; various schools and colleges for the Defence Services are referred to on pages 661–2, and other activities which may be considered broadly as educational are referred to in the section on Broadcasting and Television in Chapter 12, *Transport, Communication and Travel*. Details of Commonwealth expenditure on education are provided on pages 674–81.



### Department of Education

The Commonwealth Department of Education (formerly the Department of Education and Science), is concerned with direct grants for educational purposes, e.g. for universities, colleges of advanced education, school libraries, technical schools, and science buildings, as well as with grants for building teachers and pre-school teachers education institutions. It administers per-capita grants to non-government (i.e. independent) schools for running costs and is involved in curriculum development projects. The Department is responsible for the various Commonwealth scholarship schemes and for special scholarships offered by overseas countries for Australians. Among the Department's other responsibilities are matters in the field of international relations in education, including UNESCO and Commonwealth Co-operation in Education, and liaison with State and other education bodies throughout Australia. The Department provides professional advice on education to other Commonwealth departments and authorities and develops courses and materials for migrant education. It administers educational services in the Australian Capital Territory, (including Jervis Bay) and the Northern Territory.

For detailed information on the Acts administered by the Commonwealth Department of Education see the Australian Government Directory, 1973.

### Advisory bodies

Various advisory bodies on educational matters have been established by the Australian Government:

Advisory Committee on Child Care Research, Australian Advisory Committee on Research and Development in Education, Australian Committee on Technical and Further Education, Australian Pre-Schools Committee, Australian Universities Commission, Child Care Standards Committee, General Committee on the Scheme of Commonwealth Co-operation in Education and the Interim Committee for the Australian Schools Commission.

### Scholarship Schemes

*Commonwealth scholarships.* The Commonwealth Government provides financial assistance to students through several major scholarship schemes. A total of 48,800 new awards were made available in 1973 under these schemes.

Under the *Commonwealth Post-graduate Research Awards Scheme*, 700 new awards were made available in 1973 for students undertaking research leading to higher degrees at Australian universities. The awards are for full-time study and may be renewed annually up to a maximum period of four years. In 1973, 100 awards were made available under the scheme of Commonwealth Post-graduate Course Awards for full-time students taking Masters degrees by course work. Both groups of awards carry a stipend of \$2,900 per annum and certain other allowances.

The *Commonwealth University Scholarship Scheme* made provision for 14,500 scholarships in 1973. Of these, 9,500 are open entrance scholarships which are allocated amongst the States in proportion to population and are awarded on the basis of results achieved in Australian matriculation examinations. The remaining 5,000 scholarships are Later Year Awards for students who have already completed one or more years of a university course. A small quota of awards from each group is set aside as Mature Age Scholarships for students who have reached the age of thirty years. Scholarship holders have their fees paid and may receive a living allowance subject to a means test. The maximum rates of living allowances are \$1,300 per annum in the case of scholars living away from their parents and \$800 for scholars living with parents.

The *Commonwealth Advanced Education Scholarships Scheme* made provision for 6,000 scholarships in 1973 for students taking approved courses of advanced education at institutions other than universities. Benefits are similar to those for university scholarships.

The above schemes are the main responsibility of the *Commonwealth Scholarships Board* which is responsible for advising the Government on the policy and administration of Commonwealth post-graduate awards and university and advanced education scholarships. The Board, under its former title of the Universities Commission, was established by the *Education Act* 1945. It consists of a chairman and three other members.

From 1964 to 1972 the *Commonwealth Secondary Scholarship Scheme* students competed each year for 10,000 scholarships which assisted them during the final two years at secondary school. Benefits were free of means test and comprised a yearly living allowance of \$200, a textbook and equipment allowance of \$50 per annum and reimbursement of compulsory fees up to a maximum of \$150 per annum. From the beginning of 1973 this scheme is being phased out and replaced by the Commonwealth Senior Secondary Scholarship Scheme which provides 25,000 scholarships to assist students during the final two years at secondary school. Under these scholarships the successful applicant receives a basic allowance of \$150 per annum without a means test. A further allowance of up to \$250 per annum may be paid subject to family income.

The *Commonwealth Technical Scholarship Scheme* made available 2,500 new awards in 1973 to assist students to take approved technical courses. Most of these courses are at certificate level in technical colleges. Full-time technical scholarship holders receive, free of means test, a yearly living allowance of \$200, a text-book and equipment allowance of \$50 per annum and reimbursement of compulsory fees up to a maximum of \$150 per annum. The benefits paid each year to part-time technical scholars are an allowance of \$100, free of means test, and reimbursement of compulsory fees up to a maximum of \$100.

*Changes planned for 1974.* In 1974, as part of new arrangements for financing tertiary education, which will remove the need for students to pay compulsory tuition fees and associated charges, the Commonwealth University, Advanced Education and Technical Scholarship Schemes will be replaced by a new Tertiary Allowances Scheme. This scheme will be non-competitive and will provide means tested allowances for all eligible full-time students who do not hold other awards.

**COMMONWEALTH SCHOLARSHIPS: NUMBERS OF SCHOLARS IN TRAINING**  
**30 JUNE 1972**

<i>Type of award</i>	<i>N.S.W.(a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Post-graduate—							
Awarded—							
In 1972 . . . .	331	231	101	89	27	16	795
Prior to 1972 . . . .	568	304	133	155	64	36	1,260
<b>Total . . . .</b>	<b>899</b>	<b>535</b>	<b>234</b>	<b>244</b>	<b>91</b>	<b>52</b>	<b>2,055</b>
University scholarship—							
Awarded—							
In 1972 . . . .	4,614	3,169	1,759	1,117	876	260	11,795
Prior to 1972 . . . .	10,003	7,039	3,329	2,149	1,654	658	24,832
<b>Total . . . .</b>	<b>14,617</b>	<b>10,208</b>	<b>5,088</b>	<b>3,266</b>	<b>2,530</b>	<b>918</b>	<b>36,627</b>
Advanced education scholarship—							
Awarded—							
In 1972 . . . .	1,028	1,375	417	384	369	108	3,681
Prior to 1972 . . . .	1,167	1,359	566	457	396	113	4,058
<b>Total . . . .</b>	<b>2,195</b>	<b>2,734</b>	<b>983</b>	<b>841</b>	<b>765</b>	<b>221</b>	<b>7,739</b>
Secondary scholarship—							
Awarded—							
In 1972 . . . .	3,692	2,653	1,440	973	771	312	9,841
Prior to 1972 . . . .	3,668	2,609	1,428	943	765	244	9,657
<b>Total . . . .</b>	<b>7,360</b>	<b>5,262</b>	<b>2,868</b>	<b>1,916</b>	<b>1,536</b>	<b>556</b>	<b>19,498</b>
Technical scholarship—							
Awarded—							
In 1972 . . . .	1,137	666	245	229	203	55	2,535
Prior to 1972 . . . .	794	602	181	194	121	38	1,930
<b>Total . . . .</b>	<b>1,931</b>	<b>1,268</b>	<b>426</b>	<b>423</b>	<b>324</b>	<b>93</b>	<b>4,465</b>

(a) Includes the Australian Capital Territory.

(b) Includes the Northern Territory.

*Australian Agricultural Council Scholarships.* At the request of the Australian Agricultural Council the Department of Primary Industry makes available from the Commonwealth Extension Services Grant funds 12 scholarships annually (two in each State) to students in Australia who have qualified for a Commonwealth University Scholarship and who wish to proceed to an approved course of study leading to a degree in Agricultural Science, Agricultural Engineering, Agricultural Economics, Rural Science or Veterinary Science. The purpose of the awards is to foster interest in agriculture and related fields of study.

As at 30 June 1972, there were 55 students holding Agricultural Council Scholarships in Australia.

*Aboriginal Study Grants.* Awards under the Aboriginal Study Grants Scheme have been made since 1969 to assist Aborigines to take courses of study after leaving school. They provide full-time students with fees, a living allowance of \$1,300 per annum and other allowances; and the part-time students with fees and incidental expenses. In 1972, 689 students held grants.

*Aboriginal Secondary Grants.* This scheme was introduced to assist students to continue schooling beyond the school leaving age by paying living costs, fees and other allowances. At 30 June 1972, 4,266 students held grants. In 1973, the lower age limit of 14 years was removed and assistance was extended to all Aboriginal pupils enrolled at secondary school.



*Canberra Teacher Education Scholarships.* These awards were offered for the first time in 1971 and assist students undertaking courses of teacher training at the Canberra College of Advanced Education. The Scholarships are unbonded and benefits are similar to those for Advanced Education Scholarships. At 30 June 1972, there were 70 students holding awards.

*Pre-school Teacher Education Scholarships.* This scheme was introduced in 1973 to assist all students enrolled in pre-school teacher education courses. Benefits are free of a means test and comprise a living allowance of \$800 per annum for students living at home and \$1,300 per annum to students living away from home, and payment of all compulsory fees.

*Commonwealth Teaching Service Scholarships.* These scholarships were first introduced in 1972 to assist students taking courses of teacher training who, on completion of that training, would become members of the Commonwealth Teaching Service. There were 400 awards available in 1973. They are unbonded and entitle holders to payment of all compulsory fees and to a living allowance, which is not subject to a means test, at the rate of \$800 per annum for a scholar living at home and \$1,300 per annum for a scholar living away from home. At 30 June 1973 there were 366 scholars in training.

### International relations

An account of the relations and exchanges in the field of education before 1969 between Australia and other countries can be found in Year Book No. 55, pages 526–527.

The Department of Education is responsible for the administration of various schemes concerned with international co-operation in education.

An important UNESCO activity for 1972 was the holding of the Seventeenth Session of the UNESCO General Conference in Paris in October–November. An Australian delegation contributed to the discussions, which were concerned with the determination of the Organisation's future program activities and the adoption of the budget for the 1973–74 biennium. Members of the delegation included, for the first time, two representatives of Papua New Guinea's interests.

The six Australian specialist UNESCO Committees concentrated attention during 1972 on future UNESCO international program activities, and briefed the delegation to the Conference accordingly.

During 1972, there were several local UNESCO activities of significance. Three national seminars were held. In May, a Seminar on the Teaching of English took place, which examined present English curricula in Australian schools. This Seminar was organised by the Committee for Education. In November, the Committee for Communication, as part of its contribution to UNESCO International Book Year, organised a national seminar entitled "The Book under Challenge" which dealt with the role of books in contemporary society. In December, a regional Seminar on Drought was held. This meeting, organised by the Australia–UNESCO Committee for the International Hydrological Decade, examined techniques of managing water and associated land resources. The seminar was planned as a contribution to Asian regional co-operation in hydrology.

Overseas consultants were made available by the Director-General of UNESCO for the Teaching of English and Drought seminars. A further UNESCO consultant visited Australia, at the request of the Committee for Museums and Libraries, to advise authorities on the restoration and preservation of nineteenth century buildings.

Under the scheme of Commonwealth Co-operation in Education (CCE), the Department of Education arranged short study programs in Australia for a group of senior educationists from Africa and the Pacific and recruited a number of Australian educationists to undertake developmental assignments in developing countries of the Commonwealth.

As part of Australia's contribution to the Commonwealth program, special training courses for teachers from Commonwealth countries were arranged in 1972 by the Department of Education. A group of Ugandan infant teachers completed a two-year course in infant teaching methods at Wollongong Teachers College conducted by the New South Wales Department of Education; a one-year course in Infant Education was also conducted at Wollongong Teachers College and was attended by teachers from Fiji, Gambia, Tonga and Western Samoa. Teachers from the Gilbert and Ellice Islands, Guyana, Jamaica, Kenya, New Hebrides, Nigeria, Tanzania, Tonga, Western Samoa and Zambia participated in a one-year course in Primary Education held at the Murray Park College of Advanced Education (formerly Wattle Park Teachers College) conducted by the South Australian Education Department. The Victorian Education Department arranged a course for Inspectors of Schools, following which the participants (from Mauritius, Nigeria, Tanzania, Uganda and Zambia) attended the biennial Conference of the Australasian Association of Institutions of Inspectors of Schools, held in Hobart. A mathematics workshop was again conducted by Macquarie University.

In a new type of program introduced in 1972, eight teachers from the British Solomon Islands undertook a four-months course of attachments to small rural primary schools in New South Wales to observe methods and content of teaching in relation to rural conditions. Other programs followed by overseas educationists under the scheme of Commonwealth Co-operation in Education included



the Master of Education degree, the Diploma in the Teaching of English as a Foreign Language, primary school arts and crafts, pre-school education, educational administration, domestic science, physical education, and industrial arts.

Under the Commonwealth Scholarship and Fellowship Plan, the Department of Education is responsible for the award of Australian scholarships to students from other Commonwealth countries. In 1972, Australian awards were taken up by scholars from Britain, Canada, Cyprus, Fiji, Hong Kong, Malawi, Malaysia, New Hebrides, New Zealand, Nigeria, Singapore, Sri Lanka, Tonga, Trinidad, Uganda, Western Samoa and Zambia. The Department of Education acts as the selection agency for post-graduate scholarships offered to Australian students by other governments. Offers are received from many Commonwealth and European countries, and Japan. The offers by Commonwealth countries are made under the Commonwealth Scholarship and Fellowship Plan. In the case of the United Kingdom and Canada, the awards provide the largest single opportunities for Australian students to undertake post-graduate studies in those countries. The Department also continued to be responsible for the administrative procedures in connection with selection for the various types of travel grants offered by the Australian-American Educational Foundation to Australian scholars and educationists for study in the United States of America.

During the long school vacation at the end of 1972, the first group of 24 Australian teachers to be awarded Asian Travel Grants by the Australian Government visited Asian countries. The Department of Education was responsible for the selection. It also administers the program of ANZAC Fellowships which are designed to enable distinguished New Zealanders to pursue their professional interests in Australia. Two awards were made in 1972. New Zealand makes reciprocal offers to Australia, and the Department is involved in selection. The Department is also involved in the administration of scholarships offered by the Confederation of British Industry, which each year enable a small number of young Australian engineers to undertake practical training in Britain and the Australian Government contributes to the costs of this scheme.

Australia became a member of the Organisation for Economic Co-operation and Development (OECD) in June 1971 (for details see Chapter 6, International Relations) and has participated in the Organisation's activities in education. Australia has become an official member of the OECD Centre for Educational Research and Innovation and has participated in Sessions held in Paris. In association with the Department of Foreign Affairs, the Department of Education liaises with State education departments and other relevant bodies on educational matters arising from Australia's membership of OECD.

#### **Commonwealth grants for education purposes**

*Grants for research purposes.* The Second Report of the Australian Universities Commission recommended that during the calendar years 1964, 1965 and 1966 a total of \$10 million should be provided for universities to support research activities at the post-graduate level, half the sum to be provided by the Commonwealth and half by the States. The Australian Research Grants Committee, which is entrusted with the task of advising on the allocation for particular research projects, was established in April-May 1965. Its immediate function was to advise the Commonwealth on the distribution of the \$4 million for the year 1966.

At the beginning of 1967 it was decided that the Committee would continue to function through the 1967-1969 triennium, and was asked to recommend to the Commonwealth Government the distribution of \$9.2 million for the triennium to be provided solely by the Commonwealth. Details of the distribution of this money may be obtained from the *Australian Research Grants Committee, Report 1967-69*. An amount of \$12.5 million (later increased to \$13.1 million to cover rises in academic salaries) was allocated by the Australian Government for the 1970-72 triennium and details of its distribution can be obtained from the Report for the above-mentioned period, published in mid-1972. An amount of \$20 million has been allocated for the scheme during the 1973-75 triennium. Of this amount \$17 million is for upper atmosphere research, \$0.9 million for research in marine science, \$0.65 million for multidisciplinary research and \$0.55 million for the purpose and operation of a high resolution nuclear magnetic resonance spectro-meter. For details of Australian Government expenditure under the scheme in 1971-72 see page 677.

*Grants for universities.* The Australian Universities Commission, a statutory body established under the *Australian Universities Commission Act, 1959-1971*, advises the Minister for Education on matters in connection with the grant of Commonwealth financial assistance for universities in the States and the Australian Capital Territory. To date, the Commission has presented five triennial reports. The total financial support for universities provided by Commonwealth and State governments on the Commission's recommendations for the years 1961 to 1975 has exceeded \$2,900 million, including fees. Since the Australian universities are almost wholly dependent on government finance, the Australian Universities Commission plays a key role in the determination of the growth and balanced development of the Australian university system.

Prior to the establishment of the Commission, there were nine universities—the Universities of Sydney, New South Wales, New England, Melbourne, Queensland, Adelaide, Western Australia, Tasmania and the Australian National University. Since 1958, an additional six universities have been established on the recommendations of the Commission. These universities are the University of Newcastle and Macquarie University in New South Wales, Monash and La Trobe Universities in Victoria, James Cook University of North Queensland and Flinders University of South Australia. In the 1973–75 triennium two new universities, Griffith University in Brisbane and Murdoch University in Perth, will commence to take students and, in 1975, the Wollongong University College will become an autonomous university.

The Fifth Report of the Australian Universities Commission was published in 1972 and recommended total grants from Commonwealth and State sources for State universities of over \$893 million for the 1973–75 triennium. It also recommended grants of over \$122 million for the Australian National University. These recommendations were accepted by the Commonwealth Government which passed legislation to provide financial assistance for State universities in the 1973–75 triennium on the basis of the program recommended by the Commission.

A summary of the maximum grants by the Commonwealth for all universities for the 1973–75 triennium and for the 1967–69 and 1970–72 triennia is shown in the following table. Details of Commonwealth payments for universities are given on pages 675–7 and an historical summary of the financial assistance provided for universities by the Commonwealth Government is given in Year Book No. 55, pages 515–18.

ALL UNIVERSITIES: SUMMARY OF MAXIMUM COMMONWEALTH GRANTS FOR  
THE 1967-69, 1970-72 AND 1973-75 TRIENNA  
(\$'000)

Type of Grant	1967-69	1970-72	1973-75
Recurrent grants—			
General . . . . .	178,797	267,934	362,295
Teaching hospitals . . . . .	810	1,036	1,354
Student residences . . . . .	1,950	2,588	4,215
<i>Total recurrent grants</i> . . . . .	<i>181,557</i>	<i>271,558</i>	<i>367,864</i>
Building grants—			
Building projects . . . . .	50,683	59,276	65,301
Teaching hospitals . . . . .	4,927	2,460	2,990
Student residences . . . . .	11,524	12,117	3,904
<i>Total building grants</i> . . . . .	<i>67,134</i>	<i>73,853</i>	<i>72,195</i>
Equipment . . . . .	985	2,047	22,720
Research . . . . .	..	4,000	3,000
<i>Total Commonwealth grants for all universities (a)</i> . . . . .	<i>249,676</i>	<i>351,458</i>	<i>465,779</i>
<i>Total State grants for State universities(b)</i> . . . . .	<i>278,980</i>	<i>401,625</i>	<i>550,085</i>
<b>Total</b> . . . . .	<b>528,656</b>	<b>753,083</b>	<b>1,015,864</b>

(a) Including receipts from fees of the Australian National University.

(b) Including receipts from fees of State universities.

The Commonwealth makes the above grants available to the States on the following bases.

#### Grant

Recurrent grants for general university purposes and for teaching hospitals.

Recurrent grants for halls of residence and affiliated residential colleges.

Grants for equipment, for special research and for all buildings other than affiliated residential colleges.

Grants for buildings for affiliated residential colleges.

#### Basis

The Commonwealth Government provides \$1 for each \$1.85 available from State grants and students' fees.

Wholly supported by the Commonwealth Government.

The Commonwealth Government provides \$1 for each \$1 provided in State grants.

The Commonwealth Government provides one half of the approved project cost, the remainder being provided by the State government and the residential college on various bases.

**MAXIMUM COMMONWEALTH GRANTS TO UNIVERSITIES FOR THE 1973-75  
TRIENNIUM**  
(\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Recurrent grants—								
General . . . . .	98,962	65,776	32,323	24,621	18,488	8,025	114,100	362,295
Teaching hospitals . . . . .	475	433	189	123	94	40	..	1,354
Student residences . . . . .	1,365	1,100	690	225	270	200	365	4,215
<i>Total recurrent grants</i> . . . . .	<i>100,802</i>	<i>67,309</i>	<i>33,202</i>	<i>24,969</i>	<i>18,852</i>	<i>8,265</i>	<i>114,465</i>	<i>367,864</i>
Building grants—								
Building projects . . . . .	20,911	14,543	7,740	6,396	6,566	1,345	7,800	65,301
Teaching hospitals . . . . .	928	231	148	1,158	300	225	..	2,990
Student residences . . . . .	1,346	1,099	944	90	385	40	..	3,904
<i>Total building grants</i> . . . . .	<i>23,185</i>	<i>15,873</i>	<i>8,832</i>	<i>7,644</i>	<i>7,251</i>	<i>1,610</i>	<i>7,800</i>	<i>72,195</i>
Equipment . . . . .	9,140	5,540	2,705	2,790	1,750	795	..	22,720
Research . . . . .	1,135	850	350	375	200	90	..	3,000
<b>Total Commonwealth grants for all universities(a)</b> . . . . .	<b>134,262</b>	<b>89,572</b>	<b>45,089</b>	<b>35,778</b>	<b>28,053</b>	<b>10,760</b>	<b>122,265</b>	<b>465,779</b>

(a) Including receipts from fees\* of the Australian National University.

*Grants for colleges of advanced education.* The Commonwealth continues to be advised by the Australian Commission on Advanced Education. The following tables provide details of grants for the 1970-72 and 1973-75 triennia.

**COLLEGES OF ADVANCED EDUCATION: SUMMARY OF  
MAXIMUM COMMONWEALTH GRANTS FOR THE 1970-72 AND  
1973-75 TRIENNA**  
(\$ million)

<i>Type of grant</i>	<i>1970-72</i>	<i>1973-75</i>
Capital . . . . .	57.37	87.30
Recurrent . . . . .	57.28	108.04
Unmatched library . . . . .	0.50	0.50
Special matched library . . . . .	..	1.00
Research and investigation . . . . .	0.25	0.25
Capital assistance to student residences (non-collegiate) . . . . .	..	1.00
Capital assistance to student residences (country) . . . . .	..	0.50
Recurrent assistance to student residences (collegiate) . . . . .	0.01	0.50
<b>Total</b> . . . . .	<b>115.41</b>	<b>199.09</b>

The Commonwealth makes the above grants available to the States on the following bases.

<i>Grant</i>	<i>Basis</i>
Capital . . . . .	\$1 Commonwealth for every \$1 State
Recurrent . . . . .	\$1 Commonwealth for every \$1.85 of income from fees and State grants
Unmatched library . . . . .	No matching grant required
Matched library . . . . .	\$1 Commonwealth for every \$1 State
Research . . . . .	No matching grant required
Capital—Student residences (non-collegiate) . . . . .	\$1 Commonwealth for every \$1 State (up to a maximum of \$2,500 for each student place)
Capital—Student residences (country) . . . . .	\$1 Commonwealth for every \$1 State
Recurrent—Student residences . . . . .	Basic grant <i>plus</i> full-time student per capita contribution of \$60 per annum



**COLLEGES OF ADVANCED EDUCATION**  
**MAXIMUM COMMONWEALTH GRANTS FOR THE 1973-75 TRIENNium**  
(\$ million)

Type of grant	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
Capital . . .	21.05	25.50	7.75	10.00	7.50	3.90	11.60	87.30
Recurrent . . .	22.09	33.33	10.00	9.47	14.04	4.21	(a)14.90	108.04
Unmatched library(b) . . .	..	..	..	..	..	..	..	0.50
Special matched library(b) . . .	..	..	..	..	..	..	..	1.00
Research and investigation(b) . . .	..	..	..	..	..	..	..	0.25
Capital—Student residences (non-collegiate)(b) . . .	..	..	..	..	..	..	..	1.00
Capital—Student residences (country)(b) . . .	..	..	..	..	..	..	..	0.50
Recurrent—Student residences (collegiate)(b) . . .	..	..	..	..	..	..	..	0.50
<b>Total . . .</b>	<b>43.14</b>	<b>58.83</b>	<b>17.75</b>	<b>19.47</b>	<b>21.54</b>	<b>8.11</b>	<b>26.50</b>	<b>199.09</b>

(a) Grants less fees received. (b) State details of expenditure on this item are not yet separately available.

*Grants for technical training.* These grants are made under the *States Grants (Technical Training) Acts* 1964, 1965, 1968 and 1971–73. The grants are for capital expenditure on buildings and equipment for use in technical training. 'Technical training', for the purposes of this program, means the training of persons for engagement in trades, technical occupations and agricultural or other rural occupations below the tertiary level. From the time the scheme began in July 1964 to June 1971 the following amounts were advanced to the States, the allocation being based on total population.

**TECHNICAL TRAINING: COMMONWEALTH GRANTS TO THE STATES**  
**FOR THE PERIOD JULY 1964 TO JUNE 1971**  
(\$'000)

N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	All States
26,103	19,765	10,163	6,601	5,055	2,313	70,000

The scheme was extended for a further three years ending 30 June 1974. The 1971 Act provided a total of \$36 million. In addition, amending legislation has been passed which increased this amount by \$10 million to \$46 million. Maximum grants to the States for the triennium ending 30 June 1974 are shown in the following table.

**TECHNICAL TRAINING: MAXIMUM COMMONWEALTH GRANTS**  
**FOR THE TRIENNium ENDING 30 JUNE 1974**  
(\$'000)

N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	All States
16,988	12,820	6,721	4,323	3,699	1,449	46,000

For Commonwealth outlay on technical training during 1970–71, see pages 675–7.

The Australian Government has established an Australian Committee on Technical and Further Education which will become a Commission after the passage of enabling legislation. The Committee will advise on the development of technical and further education after June 1974 and will recommend financial assistance to the States on the basis of needs and priorities.

*Grants for teachers colleges.* The scheme commenced on 1 July 1967, and was extended for a further three years with available funds increasing from \$24 million for the 1967–70 triennium to \$30 million for the 1970–73 triennium. The grants to teachers colleges are for capital expenditure on approved building projects including the planning, erection, alteration and extension of a building plus the necessary furniture and equipment. The *States Grants (Teachers Colleges) Acts* 1967 and 1970 provide that 10 per cent of places (new or replacement) resulting from the expenditure of

Commonwealth grants must be available for private students, i.e. students not bonded, to State education departments. (For full details of the Commonwealth's role in teacher education, reference should be made to the report issued in 1972 of the Senate Standing Committee on Education, Science and the Arts.)

**TEACHERS COLLEGES: ALLOCATIONS OF COMMONWEALTH GRANTS  
FOR SIX YEARS ENDING 30 JUNE 1973**  
(£'000)

<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>All States</i>
17,400	14,850	6,780	6,800	5,600	2,570	54,000

It is estimated that the expenditure of Commonwealth grants on teachers colleges provided 5,677 places (4,371 new and 1,306 replacement places) during the period 1967-68 to 1969-70 and it will provide 6,000 places (3,520 new and 2,480 replacement places) during the period 1970-71 to 1972-73.

For details of Commonwealth grants for teachers colleges during the period 1967-68 to 1971-72 see page 676.

The Commonwealth also decided to support the introduction of teacher education into the colleges of advanced education and to provide funds for this purpose under the normal sharing arrangements for expenditure on colleges of advanced education in the States. During the triennium ending 30 June 1974, teacher training will be supported at the following colleges of advanced education: the Mitchell (Bathurst) and Riverina (Wagga) Colleges of Advanced Education in New South Wales; the Queensland Institute of Technology, Darling Downs (Toowoomba) and Capricornia (Rockhampton), and the Launceston and Hobart branches of the Tasmanian College of Advanced Education. Teacher education commenced at the Canberra College of Advanced Education in 1971.

*Pre-school teachers colleges grants.* In 1968 the Commonwealth provided \$2,500,000 for capital expenditure on approved building projects in connection with the provision of pre-school or kindergarten teacher training facilities. An approved building project includes planning, erection, alteration of a building plus the necessary furniture and equipment. The primary purpose of the grants was to double the capacity of the colleges for the training of pre-school teachers.

In Tasmania, pre-school teacher training is a function of the Tasmanian College of Advanced Education. In the other States it is currently administered by the private organisations shown in the table below. The Commonwealth's allocations made under the *States Grants (Pre-school Teachers Colleges) Act* 1968-1972, were as follows.

**PRE-SCHOOL TEACHERS COLLEGES: AMOUNTS GRANTED TO EACH STATE  
ORGANISATION RESPONSIBLE—1968-1973**  
(£)

<i>State</i>	<i>Name of college</i>	<i>Body of trustees conducting or owning property of college</i>	<i>Amount(a)</i>
New South Wales	Nursery School Teachers College	The Sydney Day Nursery and Nursery Schools Association Incorporated	650,000
	Sydney Kindergarten Teachers College	The Kindergarten Union of New South Wales, Incorporated	225,000
Victoria	Melbourne Kindergarten Teachers College	The Trustees of the Melbourne Kindergarten Teachers College	210,000
Queensland	Brisbane Kindergarten Teachers College	The Creche and Kindergarten Association of Queensland	350,000
South Australia	The Kindergarten Teachers College	The Kindergarten Union of South Australia, Incorporated	670,000
Western Australia	Meerilinga Kindergarten Teachers College	Kindergarten Association of Western Australia, Incorporated	175,000
Tasmania	Launceston Teachers College(b)		220,000
<b>Total</b>			<b>2,500,000</b>

(a) To be expended by 31 December 1973.

(b) Now part of the Tasmanian College of Advanced Education.

When the approved building projects are completed the number of places available at pre-school teacher training colleges will be 1,750, an increase of 1,024 places since 1967.

*Per capita grants to independent (i.e. non-government) schools.*

The *States Grants (Independent Schools) Act 1969* provided for the introduction in 1970 of special purpose grants to be made to the States for transmission to independent schools (non-government) as a per capita contribution from the Commonwealth towards their recurrent expenditure. The Act also provided for the payment of per capita grants for students attending non-government special schools for handicapped children. The *States Grants (Schools) Act 1972* provided that per capita payments would be on the basis of 20 per cent of the cost of educating a primary and secondary student respectively in government schools on an Australia-wide basis. States were invited to make matching payments in the future. See also *Report of the Interim Committee for the Australian Schools Commission*.

The per capita grants per student during 1970, 1971, 1972 and 1973 are as follows.

**RATES OF PER CAPITA GRANTS PAID TO  
INDEPENDENT (NON-GOVERNMENT) SCHOOLS  
DURING 1970 TO 1973  
(\$)**

Type of student	1970	1971	1972	1973
Primary . . .	35	35	50	62
Secondary . . .	50	50	68	104

*Australian Capital Territory and Northern Territory.* The Commonwealth Government provides a per capita grant to non-government schools in the Australian Capital Territory and the Northern Territory at twice the rate it pays to non-government schools in the States in its role as a 'State' Government.

Non-government schools in the Australian Capital Territory and the Northern Territory also receive grants for science facilities and for school libraries in conjunction with the capital aid scheme under which the Commonwealth Government meets the greater part of interest charges on loans and also repays, in 20 equal annual instalments, the approved costs for school building projects. For details of payments made under the Act during 1971-72, see page 678.

For the total amounts of per capita grants paid to independent (non-government) schools, see page 676.

*Grants for science laboratories.* From July 1964 to June 1975, \$123.3 million will have been distributed to the States in unmatched grants for science buildings and equipment in government and non-government secondary schools. During the present four year period which ends on 30 June 1975, grants to State schools have been provided on the basis of proposed programs agreed to between the Commonwealth and State Ministers of Education. Grants to independent schools have been approved by the Commonwealth Minister for Education in accordance with their entitlement to assistance and on the basis of reports by an Advisory Committee on Standards for Science Facilities in Independent Schools; State advisory committees representing independent schools allocate priorities within their own State.

*Grants for library facilities in secondary schools.* During the three-year period January 1969 to December 1971, the Commonwealth distributed \$27 million for the development of library facilities (erection, alteration or extension of library buildings and provision of furniture, equipment, books and library materials) in government and non-government secondary schools in the States. A further \$30 million has been provided for the same purposes in the 1972-74 triennium. Besides the Secondary Schools Libraries Committee, the Commonwealth, as with the science facilities scheme, has the advice of two advisory committees in each State, one representative of Roman Catholic secondary schools and the other representative of other non-government secondary schools. The maximum amounts available to the States during the present triennium are shown below. For details of payments made under the Act during 1971-72, see page 676.

**SECONDARY SCHOOL LIBRARIES: MAXIMUM COMMONWEALTH  
GRANTS FOR THE TRIENNIUM ENDING 31 DECEMBER 1974  
(\$'000)**

N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	All States
10,897	9,292	4,015	2,691	2,048	1,056	30,000



Following the Commonwealth contribution, in 1968-69, towards meeting the urgent need for more trained librarians to staff the new and existing libraries, further funds were made available during the period 1969-70, 1971-72 and 1972-73. These funds enabled the Commonwealth to sponsor several short specialist courses in various aspects of school librarianship in conjunction with State education departments and other interested organisations. During 1972 almost 2,000 teachers attended courses and seminars dealing with methods of library use, library organisation, selection of materials and the use of educational media. Expenditure in connection with the courses during the period 1968-69 to 1972-73 totalled approximately \$199,000.

*Capital Aid for Schools Program.* Under the *States Grants (Schools) Act 1972*, \$215 million is available for school construction by way of grants. Of this amount \$167 million is for State government schools and \$48 million for non-government schools. After 30 June 1974, the balance of the funds available under the Act will be distributed as far as non-government schools are concerned, on the basis of recommendations from the Australian Schools Commission. A total of \$9 million is being distributed to non-government schools in the six States in 1973-74.

*Interim Committee for the Australian Schools Commission.* The first grants to the States, for government and non-government schools, arising out of the accepted recommendations of the Interim Committee for the Australian Schools Commission will be paid as from the beginning of 1974. These grants will total approximately \$97 million for the six month period January to June 1974. Recurrent grants will not be available to those non-government schools which are considered to have attained or exceeded already the Interim Committee's target standard of 'recurrent resource use' i.e., the standard which all schools should desirably have reached by 1979.

As a result of the Interim Committee's recommendations, assistance will include grants to government and non-government schools for general running expenses, for the provision of new buildings, for the upgrading of existing buildings, for primary and secondary libraries, 'disadvantaged' schools, handicapped children, teacher development, special projects and information systems.

### Expenditure on education

The statistics in this section are intended to give a broad indication of the extent and direction of both government and private effort in the field of education in recent years. They have been compiled in accordance with national accounting concepts and, apart from some minor revisions which have been incorporated where later information became available, are consistent with the estimates included in *Australian National Accounts, 1971-72* (7.1). These figures can therefore be related to other national accounts aggregates. For explanation of the relevant national accounting concepts, reference should be made to *Australian National Accounts, 1971-72* and also to *Public Authority Finance: Commonwealth Authorities, 1971-72* (5.12), and *Public Authority Finance: States and Local Authorities, 1971-72* (No. 5.43), from which figures included in this section have also been taken.

The emphasis given in this section to the outlays of the public sector in part reflects the relative importance of that sector in the provision of education services, but is also a reflection of lack of detailed information relating to educational activities in the private sector. Sufficient information is given, however, to show the order of magnitude of private sector spending, and also to show aggregate demand for education services and facilities.

#### Public authority sector

The figures which follow form part of a comprehensive statistical program to reclassify the transactions recorded in the 'conventional' accounts of all public authorities into a national accounting presentation. As part of this program, the outlay of public authorities is classified by *function*, so as to reveal the broad purposes for which the public authorities undertake expenditure programs. These figures relate to those outlays which have been identified as being primarily designed to serve the purposes of 'education', broadly as defined in the United Nations System of National Accounts. Included therefore are outlays on administration and regulation of school systems and institutions of higher learning and educational research; on provision, inspection and support of primary and secondary schools, colleges and universities, technical training institutions, schools for the handicapped, adult education facilities, pre-school centres, etc.; on scholarships, research grants, etc.; and on subsidiary services such as transportation of school children and fare concessions. Expenditures on school medical and dental services and provision of free milk for school-children are not included, as these are regarded as primarily serving the purpose of health.

Application of this, or any other, definition of 'education' is far from being a straightforward matter. A particular item of expenditure may serve two or more distinct functions, and there is likely to be a degree of arbitrariness in deciding which is the primary function—the items referred to at the end of the previous paragraph are illustrative of this problem. In other cases a recorded

expenditure figure may relate to more than one function, but it may be very difficult in practice to separate them. Military colleges serve both defence and education functions. The usual practice is to classify these organisations to defence: but this practice may be of doubtful validity in the case of military colleges which are affiliated with universities. There are similar problems with the education of nurses. An initial difficulty here is that of satisfactorily identifying these expenditures in the accounts of hospitals. But even if that problem could be overcome there would still be some question as to whether this expenditure should belong in education or health. The lack of separate data decides the issue for the present—expenditure on the education of nurses in hospitals is classified to health—but the development of tertiary level courses in nursing at colleges of advanced education must eventually lead to reconsideration of this approach. There is also a problem in allocating these expenditures between the public and private sectors. Similar difficulties exist with post-graduate medical education. Another class of borderline cases relates to in-service training schemes. Here the usual practice is to classify expenditures to the primary function of the organisation providing the training: therefore all expenditures on cadetship schemes are treated in this way. Allowances paid to trainee teachers are regarded as in-service training expenditures—but in this case the primary function of their employers happens to be education, so that these expenditures are included in the figures in this statement. Expenditure on research by universities cannot be clearly separated from expenditures related to teaching; all expenditure by universities is therefore classified to education.

Apart from giving emphasis to the broad purposes of public sector outlays, a national accounting presentation of the transactions of public authorities is also designed to facilitate the study of their impact on the rest of the economy. In the following tables the outlays of the public authorities engaged in providing education services or financing their provision by other bodies, public or private, have accordingly been broken into broad categories of final expenditure on goods and services (i.e. final consumption expenditure, and expenditure on new fixed assets); capital financing items (e.g. net expenditure on existing assets); transfers to the private sector (cash benefits, grants for private capital expenditure) which become a source of finance for that sector's own final expenditures; and transfers between public authorities (Commonwealth grants to the States).

Detailed analyses have not been prepared of the accounts of all public authorities providing or financing education services but methods of analysis have been adopted which reflect the net effect of the transactions of authorities not fully analysed (such as the State universities). Private non-profit organisations are covered by recording their final consumption expenditure as final expenditure by public authorities and persons: that is, the current grants to these organisations by public authorities are treated as public authorities' final expenditure, and fees, donations, etc. paid to them by persons are included in private final consumption expenditure. Current outlay of non-profit organisations is therefore covered, being approximately equal to their income from grants and fees. For reasons of practicality, grants for capital expenditure by public authorities to private non-profit organisations are treated as transfers, so that the capital expenditure of these organisations is wholly recorded in the private sector.

Local authorities have no responsibility for the provision of education services and only participate in this field of activity to the extent of providing some support to pre-school centres in some States. These expenditures have been included in the figures for the public sector given in the last table in this section, but their impact is negligible. To all intents and purposes therefore the outlays of Commonwealth authorities and State authorities shown in the following tables may be taken together as constituting the outlay on education by all public authorities.

#### **Commonwealth authorities**

Details of outlay on education by Commonwealth authorities are given in the following table

**COMMONWEALTH AUTHORITIES: OUTLAY ON EDUCATION, 1967-68 TO 1971-72**  
(\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Current outlay—</b>					
Final consumption expenditure—					
Department of Education and Science . . . . .	2,849	3,744	4,973	6,958	8,263
Australian Universities Commission . . . . .	197	217	229	223	301
Australian Commission on Advanced Education . . . . .	..	..	..	..	69
Australian Capital Territory education services(a) . . . . .	5,669	6,767	7,652	10,184	11,929
Northern Territory education services(a) . . . . .	3,401	4,609	5,550	7,719	9,392
Australian National University . . . . .	16,276	18,698	19,370	27,237	28,800
Canberra College of Advanced Education . . . . .	43	267	936	1,653	2,100
Child migrant education scheme . . . . .	..	..	82	1,698	3,155
Australian Broadcasting Commission—School broadcasts, etc. . . . .	817	873	902	970	1,093
Melbourne University—Meteorology . . . . .	12	12	12	12	12
Sydney University—School of Public Health and Tropical Medicine, etc. . . . .	623	628	743	822	956
Technical training for ex-servicemen . . . . .	20	15	18	20	30
Non-government schools—assistance(a) . . . . .					
Australian Capital Territory . . . . .	377	629	787	1,232	1,667
Northern Territory . . . . .	17	30	86	157	242
<b>Total</b> . . . . .	<b>30,302</b>	<b>36,488</b>	<b>41,341</b>	<b>58,885</b>	<b>68,009</b>
Cash benefits to persons—					
Commonwealth scholarship scheme—					
Post-graduate . . . . .	2,899	3,588	4,526	5,209	5,888
University . . . . .	13,383	16,268	18,160	22,519	28,127
Advanced education . . . . .	754	1,001	1,628	2,793	3,552
Secondary . . . . .	6,474	6,558	6,738	6,791	6,924
Technical . . . . .	1,031	1,123	1,162	1,096	1,048
Soldiers' children education scheme . . . . .	2,720	3,154	3,203	3,407	3,625
Aboriginal study grants . . . . .	..	62	190	326	473
Aboriginal secondary grants . . . . .	..	..	522	2,201	2,536
Other(b) . . . . .	717	753	829	995	1,221
<b>Total</b> . . . . .	<b>27,979</b>	<b>32,508</b>	<b>36,959</b>	<b>45,337</b>	<b>53,393</b>
Grants for private capital expenditure—					
Non-government schools—					
Australian Capital Territory . . . . .	50	397	841	688	975
Northern Territory . . . . .	6	7	32	145	101
Residential colleges—					
Australian National University . . . . .	1,435	428	196	990	88
Aboriginal advancement . . . . .	129	42	362	266	209
<b>Total</b> . . . . .	<b>1,620</b>	<b>874</b>	<b>1,431</b>	<b>2,089</b>	<b>1,373</b>
Transfers overseas(c) . . . . .	791	800	941	938	1,003
Grants to the States—					
Universities . . . . .	39,912	43,534	50,435	58,877	67,596
Colleges of advanced education . . . . .	5,273	6,282	10,658	15,743	18,372
Australian Research Grants Committee grants . . . . .	3,154	2,879	3,446	4,170	4,341
Non-government schools—per capita grants . . . . .	..	..	12,177	24,253	29,594
Aboriginal advancement . . . . .	..	151	289	273	347
<b>Total</b> . . . . .	<b>48,338</b>	<b>52,846</b>	<b>77,005</b>	<b>103,316</b>	<b>120,249</b>
<b>Total current outlay</b> . . . . .	<b>109,030</b>	<b>123,515</b>	<b>157,678</b>	<b>210,565</b>	<b>244,029</b>
<b>Capital outlay—</b>					
Expenditure on new fixed assets—					
Department of Education and Science . . . . .	48	124	55	59	42
Australian Capital Territory education services . . . . .	4,771	4,731	6,735	5,593	6,370
Northern Territory education services . . . . .	1,883	1,711	5,595	5,127	7,672
Australian National University . . . . .	6,074	5,604	3,304	5,513	6,900
Canberra College of Advanced Education . . . . .	439	808	1,502	3,203	3,300
Child migrant education scheme . . . . .	..	..	27	147	109
Sydney University—School of Public Health and Tropical Medicine, etc. . . . .	112	113	110	79	51
<b>Total</b> . . . . .	<b>13,328</b>	<b>13,090</b>	<b>17,328</b>	<b>19,722</b>	<b>24,442</b>
Grants to the States—					
Universities . . . . .	16,329	19,097	17,234	16,346	23,002
Colleges of advanced education . . . . .	6,647	8,080	9,486	14,837	15,641
Teacher training colleges . . . . .	4,518	6,322	13,160	2,470	11,155
Pre-school teachers colleges . . . . .	..	170	309	856	631
Science laboratories . . . . .	12,587	11,762	12,898	13,062	10,824
School libraries . . . . .	..	1,703	7,540	13,257	9,780
Technical training facilities . . . . .	13,877	7,587	9,878	12,535	7,411
Aboriginal advancement . . . . .	..	656	655	672	867
Government schools . . . . .	..	..	..	..	6,660
<b>Total</b> . . . . .	<b>53,958</b>	<b>55,377</b>	<b>71,160</b>	<b>74,035</b>	<b>85,969</b>
<b>Total capital outlay</b> . . . . .	<b>67,286</b>	<b>68,467</b>	<b>88,489</b>	<b>93,757</b>	<b>110,411</b>
<b>Total outlay on education</b> . . . . .	<b>176,315</b>	<b>191,982</b>	<b>246,167</b>	<b>304,322</b>	<b>354,440</b>

(a) For further details of outlay in the Territories, see p. 678.  
C.S.I.R.O. research studentships, scholarships and allowances to students in the N.T., and Australian Agricultural Council scholarships.

(b) Includes the following items: Forestry scholarships, Commonwealth Educational Co-operation Scheme.

(c) Relates mainly to expenditure in connection with



As may be seen from the table, Commonwealth outlays are directed very largely towards the financing of outlays on education by the States and the private sector. Direct expenditure by the Commonwealth relates mainly to the costs of administering its support programs and its own educational research activities, the provision of education services in the internal territories, expenditures of statutory bodies (i.e. the Australian National University, the Canberra College of Advanced Education, and the Australian Broadcasting Commission), expenditure on the education of Aborigines by the Northern Territory administration, and the costs of the child migrant education program.

#### Grants to the States

Financial assistance to the States specifically for education purposes constitutes the major item of outlay on education by the Commonwealth. The allocation of the various categories of grants to individual States in 1971-72 is shown in the following table. The grants themselves have been described earlier, *see* pages 668-74.

#### COMMONWEALTH AUTHORITIES: GRANTS TO THE STATES SPECIFICALLY FOR EDUCATION PURPOSES, 1971-72 (\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>All States</i>
<b>Current—</b>							
Research grants . . . .	1,638	1,177	511	577	307	131	4,341
Universities . . . . .	27,223	18,586	8,412	6,676	4,594	2,105	67,596
Colleges of advanced education	3,713	7,341	1,860	1,651	2,920	887	18,372
Non-government schools—per capita grants . . . . .	10,854	9,655	4,472	1,889	2,064	660	29,594
Aboriginal advancement . . .	184	83	..	49	26	5	347
<i>Total current</i> . . . . .	<i>43,612</i>	<i>36,842</i>	<i>15,255</i>	<i>10,842</i>	<i>9,911</i>	<i>3,788</i>	<i>120,249</i>
<b>Capital—</b>							
Universities . . . . .	9,682	6,669	2,597	1,818	1,571	665	23,002
Colleges of advanced education	2,666	5,580	2,412	1,699	1,899	1,385	15,641
Technical training . . . .	2,416	1,500	1,238	1,130	747	380	7,411
Teacher training colleges . .	4,194	2,750	1,364	1,063	1,132	650	11,153
Science laboratories—							
Government schools . . . .	2,368	2,009	768	662	468	248	6,522
Non-government schools . .	1,335	1,359	831	166	443	167	4,302
School libraries . . . . .	4,195	2,519	1,044	891	765	366	9,780
Pre-school teachers colleges .	521	..	..	110	..	..	631
Aboriginal advancement . . .	20	..	441	116	290	..	867
Government schools . . . . .	2,120	1,700	840	910	620	470	6,660
<i>Total capital</i> . . . . .	<i>29,517</i>	<i>24,086</i>	<i>11,535</i>	<i>8,565</i>	<i>7,935</i>	<i>4,331</i>	<i>85,969</i>
<b>Total grants</b> . . . . .	<b>73,129</b>	<b>60,928</b>	<b>26,790</b>	<b>19,407</b>	<b>17,846</b>	<b>8,119</b>	<b>206,219</b>

**Outlay on education in the internal territories**

As mentioned previously, the Commonwealth Government is responsible for the provision of education services in the Australian Capital Territory and the Northern Territory. Details of Commonwealth outlay on education in the Territories are given below; further information may be found in Chapter 28, The Territories of Australia.

**COMMONWEALTH AUTHORITIES: OUTLAY ON EDUCATION  
IN THE INTERNAL TERRITORIES, 1971-72**

(\$'000)

<i>Australian Capital Territory</i>		<i>Northern Territory</i>	
Current outlay—		Current outlay—	
Final consumption expenditure—		Final consumption expenditure—	
Australian Capital Territory education services—		Northern Territory education services—	
Government schools and colleges—		Government schools and colleges—	
Pre-schools . . . . .	525	Pre-schools . . . . .	362
School transport . . . . .	470	School transport . . . . .	283
Repairs and maintenance . . . . .	350	Repairs and maintenance . . . . .	221
Payment to N.S.W. Department of Education . . . . .	7,962	Commonwealth Teaching Service	768
Canberra Technical College . . . . .	1,385	Payment to S.A. Department of Education, and teacher moving expenses . . . . .	3,845
School of Music . . . . .	134	Other . . . . .	728
Other . . . . .	1,322	Non-government schools—	
Non-government schools—		Student allowances . . . . .	116
Student allowances . . . . .	836	Assistance for buildings . . . . .	126
Assistance for buildings . . . . .	831		6,448
Total . . . . .	13,815	Less receipts—Technical education and other . . . . .	17
Less receipts—Technical education and other . . . . .	219	Total . . . . .	6,432
Total . . . . .	13,596	Aboriginal advancement . . . . .	3,203
Canberra College of Advanced Education . . . . .	2,100	Total, final consumption expenditure . . . . .	9,634
Total, final consumption expenditure . . . . .	15,696		
Cash benefits to persons—		Cash benefits to persons—	
University scholarships(a) . . . . .	56	Northern Territory Scholarships . . . . .	189
Secondary school bursaries and textbook allowances(a) . . . . .	122		
Total cash benefits . . . . .	178		
Grants for private capital expenditure—		Grants for private capital expenditure—	
Non-government schools, capital works . . . . .	975	Non-government schools, capital works . . . . .	101
Total current outlay . . . . .	16,850	Total current outlay . . . . .	9,925
Capital outlay—		Capital outlay—	
Expenditure on new fixed assets—		Expenditure on new fixed assets—	
Australian Capital Territory education services—		Northern Territory education services—	
Government schools and colleges—		Government schools and colleges—	
Pre-schools . . . . .	36	New buildings and works . . . . .	6,825
Primary schools . . . . .	3,330	Plant and equipment . . . . .	96
Secondary schools . . . . .	2,205	Furniture and fittings . . . . .	119
Canberra Technical College . . . . .	19	Total . . . . .	7,039
Plant and equipment . . . . .	225	Aboriginal advancement . . . . .	632
Furniture and fittings . . . . .	170	Total capital outlay . . . . .	7,672
Other building and related expenditure . . . . .	385	Total outlay . . . . .	17,597
Total . . . . .	6,370		
Canberra College of Advanced Education . . . . .	3,300		
Total capital outlay . . . . .	9,670		
Total outlay(b) . . . . .	26,519		

cludes Commonwealth Secondary and Technical Scholarships.

(b) Excludes the Australian National University.

## State authorities

The following table shows the outlay on education by State authorities, financed from their own resources (including general purpose grants from the Commonwealth), and from Commonwealth grants for education purposes.

## STATE AUTHORITIES: OUTLAY ON EDUCATION

1967-68 TO 1971-72

(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Final consumption expenditure</b>					
New South Wales . . . . .	228	252	299	368	436
Victoria . . . . .	187	217	257	304	358
Queensland . . . . .	72	84	99	119	142
South Australia . . . . .	64	71	82	99	122
Western Australia . . . . .	50	57	71	86	105
Tasmania . . . . .	24	26	30	37	42
<i>Total</i> . . . . .	625	707	838	1,012	1,204
<b>Expenditure on new fixed assets—</b>					
New South Wales . . . . .	60	73	75	81	99
Victoria . . . . .	54	56	60	73	77
Queensland . . . . .	16	24	26	29	35
South Australia . . . . .	15	18	21	27	31
Western Australia . . . . .	15	15	20	19	21
Tasmania . . . . .	5	7	7	8	13
<i>Total</i> . . . . .	165	191	209	236	275
Expenditure on existing assets . . . . .	..	..	1	1	1
Cash benefits to persons . . . . .	16	21	26	29	35
Grants for private capital expenditure . . . . .	8	7	9	11	11
<b>Total outlay on education . . . . .</b>	<b>815</b>	<b>926</b>	<b>1,083</b>	<b>1,290</b>	<b>1,526</b>
<i>of which—</i>					
New South Wales . . . . .	299	338	389	466	555
Victoria . . . . .	247	279	324	384	442
Queensland . . . . .	92	112	131	156	186
South Australia . . . . .	80	90	107	131	158
Western Australia . . . . .	68	74	93	108	130
Tasmania . . . . .	30	34	39	46	56



**All public authorities**

The outlay on education of all public authorities consists of the final expenditure on goods and services of the Commonwealth and State authorities and transfers by these authorities to the private sector. These figures are brought together in the following table, and are related to the total outlay (on all functions) by all public authorities to give an indication of the share of government resources devoted to education.

**OUTLAY ON EDUCATION: ALL PUBLIC AUTHORITIES**  
**1967-68 TO 1971-72**

(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Commonwealth authorities—</b>					
Final consumption expenditure . . .	30	36	41	59	68
Cash benefits to persons . . .	28	33	37	45	53
Transfers overseas . . .	1	1	1	1	1
Grants for private capital expenditure . . .	2	1	1	2	1
Expenditure on new fixed assets . . .	13	13	17	20	24
<b>Grants to the States—</b>					
Current . . . . .	48	53	77	103	120
Capital . . . . .	54	55	71	74	86
<b>Total Commonwealth . . . . .</b>	<b>176</b>	<b>192</b>	<b>246</b>	<b>304</b>	<b>354</b>
<b>State authorities—</b>					
Final consumption expenditure . . .	625	707	838	1,012	1,204
Cash benefits to persons . . .	16	21	26	29	35
Grants for private capital expenditure . . .	8	7	9	11	11
Expenditure on new fixed assets . . .	165	191	209	236	275
Expenditure on existing assets . . .	..	..	1	1	1
<b>Total State . . . . .</b>	<b>815</b>	<b>926</b>	<b>1,083</b>	<b>1,290</b>	<b>1,526</b>
<b>less Grants from Commonwealth for education purposes . . . . .</b>	<b>102</b>	<b>108</b>	<b>148</b>	<b>177</b>	<b>206</b>
<b>Outlay financed from States' own resources and from non-specific Commonwealth grants . . . . .</b>	<b>712</b>	<b>818</b>	<b>935</b>	<b>1,112</b>	<b>1,320</b>
<b>Total outlay on education . . . . .</b>	<b>889</b>	<b>1,010</b>	<b>1,181</b>	<b>1,417</b>	<b>1,675</b>
<b>Total outlay on all functions . . . . .</b>	<b>8,105</b>	<b>8,632</b>	<b>9,676</b>	<b>10,510</b>	<b>11,822</b>
	per cent	per cent	per cent	per cent	per cent
<b>Outlay on education as percent of total outlay . . . . .</b>	<b>11.0</b>	<b>11.7</b>	<b>12.2</b>	<b>13.5</b>	<b>14.2</b>

**Total expenditure on education**

Total outlay on education can be measured by adding to the outlay of the public sector (as shown in the previous table) the final expenditure on education which the private sector finances from its own resources, or alternatively by adding together the final expenditures of both sectors (i.e. by consolidating out the public authority transfers, and also any net transactions in existing assets).

Final expenditure on education by the private sector consists of private final consumption expenditure on education services, and expenditure on new fixed assets—mainly by private non-profit organisations, and financed in part by the grant from public authorities for private capital expenditure. These grants are treated as transfers rather than final expenditure of public authorities as with the current grants, and are recorded as a source of funds for capital formation in the national capital account. Private final consumption expenditure on education services is an estimate of fees paid by persons to government schools (mainly technical and agricultural colleges), fees and gifts to universities and school fees (other than boarding fees) paid to non-government schools, business colleges, etc., and is based largely on information relating to fees charged and enrolments at these institutions. Expenditure on such items as school books, uniforms, etc and expenditure by parents associations on school equipment are included in categories other than education services (such as clothing, etc., newspapers, books, etc., and household durables). Private gross fixed capital expenditure in the field of education is estimated from statistics of the value of work done on new building and major additions to buildings of private educational institutions.

Estimates for these items of final expenditure of the private sector have been combined with the figures for public sector expenditure in the following table to provide a measure of total outlay on education. This latter item may also be regarded as a measure of the aggregate demand for education services and facilities by the community and can therefore be related to the supply of goods and services available from domestic production (i.e. gross domestic product). This relationship is shown in the table as an indicator of total community effort in the field of education.

**EXPENDITURE ON EDUCATION: AUSTRALIA 1967-68 TO 1971-72**  
(\$ million)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Public authority sector—</b>					
Final consumption expenditure . . .	656	744	879	1,071	1,272
Expenditure on new fixed assets . . .	179	204	226	256	300
<i>Total expenditure (1) . . .</i>	<i>834</i>	<i>948</i>	<i>1,105</i>	<i>1,327</i>	<i>1,572</i>
<b>Transfers to the private sector and expenditure (net) on existing assets .</b>	<b>54</b>	<b>62</b>	<b>76</b>	<b>90</b>	<b>103</b>
<i>Total outlay . . .</i>	<i>889</i>	<i>1,010</i>	<i>1,181</i>	<i>1,417</i>	<i>1,675</i>
<b>Private sector—</b>					
Private final consumption expenditure .	134	145	158	172	194
Expenditure on new fixed assets . . .	31	27	37	46	41
<i>Total expenditure (2) . . .</i>	<i>165</i>	<i>172</i>	<i>195</i>	<i>218</i>	<i>235</i>
<b>less transfers from public authorities and sales (net) of existing assets . . .</b>	<b>54</b>	<b>62</b>	<b>76</b>	<b>90</b>	<b>103</b>
<b>Expenditure financed from the private sector's own resources . . .</b>	<b>111</b>	<b>110</b>	<b>119</b>	<b>128</b>	<b>132</b>
<b>Total expenditure on education (1) and (2) . . .</b>	<b>999</b>	<b>1,120</b>	<b>1,300</b>	<b>1,545</b>	<b>1,807</b>
<b>Gross Domestic Product . . .</b>	<b>24,279</b>	<b>27,216</b>	<b>30,086</b>	<b>33,107</b>	<b>36,508</b>
	per cent	per cent	per cent	per cent	per cent
<b>Expenditure on education as percent of Gross Domestic Product . . .</b>	<b>4.1</b>	<b>4.1</b>	<b>4.3</b>	<b>4.7</b>	<b>4.9</b>

## CULTURAL ACTIVITIES

### Cultural organisations

#### Australian Council for the Arts

In January 1973 the Prime Minister announced the Government's intention to legislate to establish the Australian Council for the Arts as a statutory authority. Foundation members of the Council and Boards have been appointed. The Council's first responsibility is to prepare a report on the workings of the new organisation to serve as a basis for legislation.

The basis of the Council will be a number of boards dealing with different areas of the arts, including theatre, visual arts, music, literature, crafts, film and television and Aboriginal arts. The boards will be the main source of policy initiatives in their field, having authority to deal with their own budget allocation, and in consultation with the Australian Council for the Arts, to appoint specialist staff and committees to implement their policies. The Chairman of each of these boards will be a member of the Australian Council for the Arts.

The new Council will be responsible to the Government for the development of broad policies for the arts. It will advise the Government on new initiatives, on overall budgetary requirements and on matters referred to it by the Prime Minister or other Ministers. It will act as a forum for discussion and co-ordinated planning between various boards.

#### Australian Elizabethan Theatre Trust

The Australian Elizabethan Theatre Trust, originally formed to present drama, opera, ballet and puppetry throughout Australia, has accorded full autonomy to most of the performing companies established by the Trust in its earlier years. The Marionette Theatre of Australia continues to operate under Trust administration. The Trust's major functions now are to supply certain financial guarantees to the independent performing companies; to maintain two orchestras to service the requirements of the Australian Opera and the Australian Ballet; to administer subscription booking systems on which both of these companies now operate; to act as entrepreneur in the touring of theatre features from overseas and Australian sources and to provide general services in communication for theatre organisations.

The Trust receives annual grants from Federal, State and local governments and its revenue is supplemented by subscriptions from members and donations from businesses.

#### Arts Council of Australia

With the exception of Western Australia, the Arts Council of Australia has a division in each State and Territory. Throughout Australia there are more than 160 branches. A Federal Secretariat was opened in Canberra in 1969 but moved to Sydney in 1971.

The Federal Secretariat and the Divisions of the Arts Council receive funds from the Australian Council for the Arts. The Divisions also receive State Government assistance and some activities of the Council are supported financially by non-metropolitan local government bodies. The New South Wales Division is represented on the Adult Education Advisory Board in that State, and on the Music Committee of UNESCO. The Tasmanian Division is represented on, and works closely with, the Adult Education Board of that State.

The Arts Council works to bring the arts to country centres and metropolitan and country schools, and is also concerned with taking the arts to children. Tours by high standard companies in opera, ballet, drama, puppets, etc., operate throughout the year. The Arts Council works closely with regional companies in organising country tours for these bodies.

The Council handles a wide range of art exhibitions in city and country areas. Summer schools and other courses for drama, painting, pottery, music, and other arts are an established feature, as are weekend schools of drama, music, painting and pottery. Yearly drama festivals are conducted and school tours are organised.

#### Australian National Trusts

The Australian National Trusts were founded to further the preservation of lands, places, buildings, works, and articles which are of national importance because of educational, aesthetic, historic, architectural, artistic, scientific, cultural, or other special interest.

The first Australian National Trust, the National Trust of Australia (New South Wales), was formed in 1945. Since then National Trusts have been formed in each of the other States. The Trusts in New South Wales, Queensland, South Australia, and Western Australia have statutory authority, and those in Victoria and Tasmania are incorporated under the Companies Act of their respective States. The Australian Council of National Trusts was incorporated in 1965 to co-ordinate the activities of the State National Trusts and represent them at the federal level and internationally.



Membership of the National Trusts is open to all individuals and organisations. Total membership throughout the Commonwealth is approximately 41,000. The Trusts are financed by members' subscriptions and donations from individuals and commercial and industrial organisations, the proceeds of charges for entry to Trust properties and the fund-raising activities of members, including inspections of historic houses. In all States the National Trusts receive some financial support from the State Governments. The Commonwealth supports the Council through an annual grant of \$5,000 for administrative purposes, and in 1972 a further annual grant of \$50,000 was approved, this grant being intended for capital expenditure on the basis of national priorities. The Commonwealth also provides support through taxation concessions.

The number of properties owned or controlled by the Trusts exceeds sixty. These include houses, natural reserves, a powder magazine, a police station, a gaol, two paddle steamers and a hulk, a joss house, and a garden. The Trusts have also established a register of buildings (totalling several thousand) which they consider should be preserved in the national interest because of their historical and/or architectural significance.

#### **Historic Memorials Committee**

The Historic Memorials Committee was established in 1911 for the purpose of securing portraits of distinguished Australians who had taken an active part in Federation. Later the Committee decided to obtain portraits of all Governors-General, Prime Ministers, Presidents of the Senate, Speakers of the House of Representatives, and other notable Australians. In addition the Committee has commissioned paintings recording special events connected with the Commonwealth Parliament.

The Committee comprises the Prime Minister (Chairman), the President of the Senate, the Speaker of the House of Representatives, the Vice-President of the Executive Council, the Leader of the Opposition, and the Leader of the Opposition in the Senate. The Committee is advised on the commissioning of portraits by the Visual Arts Board of the Australian Council for the Arts.

### **Film production**

#### **Australian National Film Board**

The Australian National Film Board advises the Minister for the Media on matters concerned with the production, acquisition and distribution of films required by Commonwealth departments for use within Australia on important matters of national interest and welfare, such as school and adult education, rehabilitation, social development, international understanding, trade and tourist expansion, and immigration; and for dissemination abroad to expand trade and commerce with other countries, to encourage tourist traffic with Australia, to improve Australia's relations with other countries and, where necessary, to explain Australia's national policies, and to encourage immigration.

The Board has twelve members with the Secretary of the Department of the Media as chairman, and the remainder representative of Commonwealth departments, State government instrumentalities and other interested organisations.

#### **Film Australia**

The Film Branch (formerly the Commonwealth Film Unit) of the Department of the Media is the official film production and distribution agency for Commonwealth departments and instrumentalities. It is referred to as Film Australia. It distributes its theatrical and television productions in Australia and overseas through its representatives at Australian official posts. Non-theatrical distribution in Australia is arranged in co-operation with State film distribution agencies, and through the National Library of Australia.

The Film Branch produces films for general exhibition, as well as training and special purpose films. In 1971-72 the Film Branch produced approximately 139 reels of new films and 182 reels of foreign versions of existing films. While many films are released commercially abroad, the emphasis is on distribution of educational and information films through non-theatrical circuits. Selected films have been recorded in most Asian and European languages and in Esperanto and Pidgin.

In addition to films made on its own initiative, Film Australia produces films under the sponsorship of, or with the co-operation of, Commonwealth departments and other government instrumentalities.

#### **Australian Film Development Corporation**

The *Australian Film Development Corporation Act 1970* provided for the establishment of an Australian Film Development Corporation to encourage the making of Australian cinematographic and television films and to encourage the distribution of such films within and outside Australia. The Corporation administers a fund which had an initial capital of one million dollars which is added to from time to time as the Government decides. The Corporation makes investments in films, makes loans to film and television producers, and will guarantee repayment of loans made to producers of Australian films.

### Australian Film and Television School

Legislation establishing the Film and Television School with the status of a college of advanced education is being introduced in 1973. When fully operational the School will offer courses for students in all aspects of film and television production together with in-service programs for professionals and educationalists already working in film and television.

In 1973 the School is running an Interim Training Scheme of basic film and television courses for twelve students, and a series of advanced seminars for professionals and educationalists. The Council of the School is responsible for co-ordinating the Government's assistance programs to film and television training and educational projects. Support is given to workshops, seminars, film schools, together with grants-in-aid for overseas study and experience.

The School buildings will be situated on the campus of Macquarie University.

## Censorship

### National Literature Board of Review

The National Literature Board of Review was established in 1968, following Commonwealth-State agreement, to achieve uniformity in the administration of laws relating to blasphemous, indecent or obscene publications of *prima facie* literary, artistic or scientific merit. In terms of the agreement the Board is established under the Customs (National Literature Board of Review) Regulations. Appropriate Ministers of any State may, under the Agreement, refer works published or distributed locally to the Board for advice. Subject to retention of final responsibility by each Minister it is the intention of the Governments concerned not to act against a publication of merit which the Board advises is suitable for distribution in Australia.

### Film censorship

The Federal Government's powers over censorship of films under the Customs Act extend only to imported films and imported advertising matter. Under that Act the Customs (Cinematograph Films) Regulations provide for the appointment of a Film Censorship Board whose function is to ensure that films and related advertising material coming within certain defined categories, are not admitted into Australia. The Film Censorship Board comprises seven persons and there are six members of a Cinematograph Films Board of Review. Importers have a right of appeal to the Minister.

The Australian censorship function is now the responsibility of the Attorney-General's Department and all States have agreed that the Federal Government should be the censorship authority for the purpose of the State Acts. They have agreed to vest in the two Boards the power to register and classify films.

*Thirty-five mm films.* In 1972, 1,255 films comprising approximately 1,896,000 metres were examined. Of these films 285 originated in the United Kingdom, 249 in the United States of America, 108 in Italy and 613 in other countries. Included in these figures were 605 full-length feature films which constitute the main theatrical attractions. Principal suppliers were: USA (170), UK (98), Italy (55), USSR (34), France (28), Greece (22) and Germany (14). Forty-five (45) feature films were rejected and cuts were made from sixty-six (66). There were twenty-one (21) appeals, seventeen (17) against rejection, two (2) against proposed eliminations and two (2) against classification. Ten (10) appeals were allowed and eleven (11) disallowed. Of the 605 feature films, 113 were awarded the "R" (Restricted) Certificate, 156 were recommended for showing to mature audiences ("M"), 160 were not recommended for children ("NRC"), 100 were classified as suitable for children ("G") and 76 were classified for use under festival conditions only. While the "M", "NRC" and "G" classifications are advisory, children between the ages of 6 and 18 (2 and 18 in South Australia) are excluded by law from seeing "R" films.

In addition to these imported films, there were 57 thirty-five mm films of 27,501 metres produced in Australia.

*Sixteen mm films.* Excluding those imported for television use, 5,481 films of approximately 1,806,200 metres were examined.

*Eight and 9.5 mm films.* There were 1,372 films (approximately 72,700 metres) which were examined.

*Television films.* In 1972, 6,915 films for use on television were examined. There were 746 video tapes of a total running time of 508 hours and the principal importers were TCN (283 tapes), ATN (265 tapes) and ABN (145 tapes). There were 6,169 (2,791,543 metres) of sixteen mm films imported.

The principal suppliers were USA (3,401 films) and UK (1,393 films). Of the total imports 2 were rejected, 492 films were cut (2,415 metres) and 51 were classified as unsuitable for televising.



## Museums and art galleries

A museum or art gallery is considered for statistical purposes to be a building, group of buildings or parts of buildings, managed as a unit and intended predominantly for the permanent display of objects of interest (museum) or objects of art (art galleries) to the general public. Institutions displaying live exhibits are excluded (the more important of these are mentioned on pages 692-4), as are buildings used for temporary displays (exhibitions, commercial galleries exhibiting only for sale) without a permanent stock of exhibits; permanent exhibitions which are ancillary to other activities such as exhibits at council chambers, libraries, hotels, and other commercial enterprises providing services to tourists and sightseers; collections which are not readily accessible to the general public, such as university collections for the use of students and research workers; and historic homes, etc., not specifically intended for the permanent display of objects of interest (i.e. where the building itself and its normal fittings are essentially on display).

### Museums and art galleries

The following table classifies by States and Territories and by ownership the institutions in Australia which have been identified in 1971 as museums and art galleries (branches of museums and art galleries are not shown separately). The information shown below is only collected at two-yearly intervals.

MUSEUMS AND ART GALLERIES: STATES AND A.C.T., AND OWNERSHIP, 1971  
(Number)

	Major institutions			Other institutions			
	Museums	Art galleries	Mixed institutions	Museums	Art galleries	Mixed institutions	All institutions
State or Territory—							
New South Wales . . . .	3	(a)1	..	4	3	2	13
Victoria . . . . .	3	1	..	5	7	2	18
Queensland . . . . .	1	1	..	1	2	..	5
South Australia . . . . .	1	1	..	7	2	..	11
Western Australia . . . .	1	1	..	3	1	..	6
Tasmania . . . . .	..	..	2	..	..	..	2
Australian Capital Territory .	1	..	1	1	..	..	3
Ownership—							
Commonwealth Government .	1	..	1	1	..	..	3
State Governments . . . .	8	5	1	3	..	1	18
Municipal authorities . . . .	1	..	1	6	7	1	16
Private trusts . . . . .	..	..	..	5	6	1	12
Universities . . . . .	..	..	..	1	1	1	3
Private . . . . .	..	..	..	5	1	..	6
<b>Total museums and art galleries . . . . .</b>	<b>10</b>	<b>5</b>	<b>3</b>	<b>21</b>	<b>15</b>	<b>4</b>	<b>58</b>

(a) Closed for alteration from October 1970 to May 1972.

Some descriptive detail in respect of the major institutions is given on pages 547 to 549 of Year Book No. 55.

## Libraries

The Munn-Pitt Report of 1935 greatly stimulated interest in libraries and librarianship throughout Australia. This is evidenced by the development of libraries, the passing of legislation in all States to increase library services, and the establishment in 1937 of the Australian Institute of Librarians to improve the standard of librarianship. This body was reconstituted in 1949 as the Library Association of Australia and incorporated by Royal Charter in 1963, and its functions now include the promotion and improvement of libraries and library services.

An account of the establishment, growth and functions of the National, Commonwealth, and State libraries is given on pages 533-538 of Year Book No. 55.

### Commonwealth libraries

*National Library of Australia, Canberra.* The National Library maintains and develops a national collection of library material, representative of all the major countries of the world, and it is also responsible for assembling a comprehensive collection relating to Australia and the Australian people. In fulfilment of the latter statutory function it seeks to preserve books, periodicals, newspapers, government publications, pictures, prints, manuscripts, maps, moving picture films, and sound



recordings. It is assisted in this by the deposit provisions of the *Copyright Act* 1968 and has also been enriched by the acquisition of such notable collections as the Petherick collection of 16,500 items in 1911, the Cook manuscripts in 1923, the Cumpston collection on Public Health in Australia in 1936, the Mathews ornithological collection in 1940, the Rex Nan Kivell collection of 16,000 items of Australian and Pacific interest including original paintings, prints, manuscripts, and printed material in 1959, and the Ferguson collection of Australiana, acquired in 1970. The Library maintains a permanent exhibition of paintings, prints, and other historical material selected from its various collections.

In association with the Library of New South Wales, the Library is engaged on a microfilming project to copy original records relating to Australia which are held in Great Britain and other overseas countries.

*Australian National Bibliography*, which appears weekly, monthly, four monthly and annually, lists books published in Australia and books dealing wholly or substantially with Australian subjects or written by Australian authors. It is now computer produced and the records are available in machine-readable form. Catalogue cards for Australian books listed in the bibliography are also made available. The publications of the Australian governments, included in *Australian National Bibliography*, are also listed quarterly and annually in *Australian Government Publications*. A select list of authoritative Australian books of reference and research value is published annually as *Australian Books*. A similar list of serials is published in successive editions under the title *Current Australian Serials*. The Library's principal activity in subject bibliography is its *Australian Public Affairs Information Service*. A listing of maps and atlases, included in *Australian National Bibliography* from 1961 to 1967, has since that time been recorded in a separate quarterly publication entitled *Australian Maps*.

Co-operative bibliographical activity includes recording, in a series of union catalogues, the holdings of the major Australian libraries. The national union catalogue of monographs, maintained in card form, was commenced in 1960 and since then all the larger and an increasing number of the smaller libraries have reported their monograph accessions to the National Library. The major published union catalogue is the loose leaf, continually revised *Serials in Australian Libraries, Social Sciences and Humanities*, which complements another catalogue, *Scientific Serials in Australian Libraries* published by the Commonwealth Scientific and Industrial Research Organization.

Under an agreement with the United States National Library of Medicine, the Library has, since 1969, operated a regional Medical Literature Analysis and Retrieval (MEDLARS) Centre. The Australian MEDLARS Service contributes indexed entries to this system and on request provides computer-produced bibliographies of recent and current material to workers in the various bio-medical fields.

The National Library acts as a central library of documentary and educational films, its film collection containing approximately 9,000 titles, together with Australian historical films. It published *Australian Films: a Catalogue of Scientific, Educational and Cultural Films*, 1940-58 in 1959 and annual supplements in succeeding years.

The National Library's collections contain over 1,300,000 volumes, 25,000 paintings, pictures and prints, 100,000 photographs, 66,000 reels of microfilm, 4,700 running feet of manuscripts, 60,000 motion picture stills, 18,000 reels of moving picture films, 245,000 maps, and 500,000 aerial photographs.

*Patent Office Library.* The Library of the Commonwealth Patent Office, Canberra, contains approximately 16,000 books and a wide variety of periodicals and other literature relating to pure and applied science, industrial technology and the industrial property (patent, trade mark and design) laws and practice of most countries. Patent specifications of inventions are received from the principal countries of the world; present holdings are over 14,000,000. Indexes include a microfilm of a classified index to 3,000,000 U.S.A. patents and translations of abstracts of U.S.S.R. patents.

*Commonwealth Scientific and Industrial Research Organization.* The library holdings of the Organization cover the pure and applied sciences. In addition to the Central Library and Information Services located in East Melbourne, each of the Divisions has specialised collections covering such subjects as food research, building research, soil research, chemistry, physics, animal health, and fisheries. The Central Library maintains a union catalogue of the holdings of all CSIRO libraries.

*The Australian War Memorial Library.* In the War Memorial library are housed the documentary and pictorial records of Australia's fighting services in wars in which they have participated. The printed records section contains over 70,000 volumes, a large collection of military maps, newscuttings and newspapers, sound recordings, war posters, and postage stamps. The collection of official war photographs covering the 1914-18, 1939-45 and Korean Wars numbers over 250,000, and a collection of official motion picture film depicts Australia at war. Adequate facilities exist for public research and requests for information are met where practicable.

*The Commonwealth Parliamentary Library.* The library is organised to provide a specialised service to the Commonwealth Parliament. The two main sections are the Legislative Research Service and the Legislative Reference Service. The Research Service comprises six groups—(i) Defence, Science Technology; (ii) Education and Welfare; (iii) Finance, Industries, Trade and Development; (iv) Foreign Affairs; (v) Law and Government; (vi) Statistics. The groups are staffed by specialists who prepare analyses and interpretations of specific issues with which the Parliament is or may be concerned. These are usually in written form but may consist of consultations with individual Members of Parliament or the Committees of Parliament. The Research Service also provides specialised information for Members. The Reference Service answers questions and provides information on any subject, mainly from books, government documents, Hansard reports, periodical articles, and newspapers. The Library collection is concentrated on topical material, supported by a wide collection of standard references; it totals 25,000 titles, including 8,000 serial titles. The Library publishes the *Parliamentary Handbook* which is a standard reference work, a series of periodical abstracting bulletins, occasional annotated reading lists and a fortnightly accessions list.

*Other Commonwealth Government Libraries.* Most Commonwealth authorities have specialised collections in their own fields and in addition draw largely on the National Library.

*Library services in the Territories.* The Northern Territory Library Service maintains five centres in the Territory. At 30 June 1972, stocks totalled 72,874 volumes which were held at the following centres: Darwin, 31,026; Nightcliff, 10,120; Alice Springs, 18,638; Tennant Creek, 6,776; Katherine, 6,314. The National Library, through its Extension Services Section, conducts the Canberra Public Library Service to residents of the Australian Capital Territory, to whom 1,213,502 loans were made in 1971–72. At 30 June 1972, 379,192 volumes were held, 226,977 at adult libraries, and 152,215 at children's libraries.

### State libraries

*New South Wales.* At 30 June 1972, 188 councils had established libraries in terms of the Library Act, 1939. During 1971–72 they spent on their libraries \$8,323,616 including \$2,092,061 received in subsidy. There are 266 libraries, of which 97 are in the metropolitan area and 169 in the country. There are also 24 bookmobiles, of which 10 are in the Sydney metropolitan area and 14 in country municipalities and shires. These libraries contain 4,953,510 volumes and issued 25,306,620 books during 1971. The Library of New South Wales provides a central cataloguing service for municipal and shire libraries constituted under the Act.

Under the Library of New South Wales Act, 1969, the former Public Library of New South Wales became the Library of New South Wales. It includes a General Reference Department of 658,699 volumes, an Extension Service, together with the Shakespeare Tercentenary Memorial Library, and the Mitchell and Dixon Libraries and Galleries which are mainly devoted to Australian and Pacific material. The Extension Service lends books to municipal and shire libraries and to individual borrowers. The total stock of the Service is 83,810 volumes, and 25,471 books were lent to public libraries and individual borrowers during 1971–72. In 1972 there were 281,253 volumes in the Mitchell Library, in addition to manuscripts, maps and other material. The total number of volumes in the Library of New South Wales now exceeds 1,203,006 apart from manuscripts, historical pictures, and other material. The Library maintains an adult education section servicing adult education activities for the Universities of Sydney and New England and the Workers' Educational Association.

Other important libraries in New South Wales are: Teachers Colleges, 389,081 volumes; the City of Sydney Public Library, 242,512; Department of Technical Education, 360,333; Railway Institute, 167,787; Parliamentary Library, 145,650; Australian Museum, 40,400; Government Transport Institute, 25,168; New South Wales Teachers' Federation Library, 27,000; Workers' Educational Association, 16,250; and the Library at the National Herbarium, 12,100 volumes.

*Victoria.* During 1972–73, 170 councils representing 3,278,000 Victorians shared Government library grants amounting to \$2,786,597. Of this amount, \$2,558,600 was direct municipal library subsidy. With the addition of expenditure from these councils' own funds the total expenditure on municipal library services for 1972–73 was nearly \$7,000,000. In 1971–72, 1,028,000 borrowers used the free library services now totalling 3,506,000 books, to the extent of 17,572,000 issues.

Particularly in the country, services have been developed by means of regional libraries. These services, of which there are 27 at present, comprising a total of 130 councils, consist of groups of councils which pool their resources, book-stocks and trained staff. The Victorian Government provides an Establishment and Regional Library Development Grant of \$200,000 per annum.

There are 17 bookmobile services operating in Victoria, 12 in country regions and 5 in the metropolitan area.



The collections of the State Library of Victoria comprise more than 1 million volumes. Of these the La Trobe collection consists of approximately 60,000 volumes as well as many pictures, manuscripts and old newspapers. The State Library receives 7,500 periodicals, annuals and newspapers. The Library also administers the State Archives, which comprise 55,000 shelf feet of records.

*Queensland.* The holdings of the State Library of Queensland and its extension services in 1971-72 were: main reference collection, 243,002 volumes, 12,072 pamphlets, 17,000 maps (approximately); Country Extension Service Collection 95,192 volumes; Oxley Memorial Library Collection 30,759 volumes and 46,241 other items. Interim count for current titles in the Serials section is 4,650 titles.

Local authorities are empowered by the Libraries Acts to establish and conduct library services as a function of local government. In 1971-72, 88 local authorities were conducting 168 library services. The Brisbane City Council has established 21 of these libraries, also a mobile library to serve eight outlying suburban areas, and a bookmobile which takes books to incapacitated people. There are 139 libraries in Queensland free to adults. To help overcome the problems of a large area and sparse population, various local authorities have established 4 regional library services with headquarters at Charleville, Barcaldine, Mount Isa and Emerald, respectively. During 1971-72 the State Government provided a grant of \$1,155,059 from consolidated revenue to finance the activities of the State Library, to pay subsidies to local bodies conducting free library services, and for the acquisition or improvement of library buildings and equipment, and to pay lesser subsidies on books, equipment and maintenance to local bodies conducting subscription libraries.

At 30 June 1972 the Parliamentary Library of Queensland held about 100,000 volumes and pamphlets.

*South Australia.* The Reference Department of the State Library of South Australia contains 295,432 volumes and receives over 3,200 periodical titles. There are 61,604 volumes in the Adelaide Lending Service. The Country Lending Service has 605,980 volumes. The Adelaide Lending Service lent 369,187 books in 1971-72, and the Country Lending Service, 163,747.

The library of the Parliament of South Australia held approximately 60,000 volumes in 1972.

There are 31 local public libraries in South Australia provided by 22 local government and other authorities. The libraries are subsidised on a \$1 for \$1 basis by the State Government. The Libraries Board of South Australia, through the State Library of South Australia, provides various central services. Book-stocks are pooled in the State Library of South Australia and are interchanged between the libraries.

At the end of June 1972 these local public libraries contained 303,246 books. There were 127,172 registered borrowers. During 1971-72, 2,365,738 books were lent.

*Western Australia.* The Library Board of Western Australia administers the State Reference Library and the Central Music Library, and provides all books and related services to 139 local public libraries throughout the State. Its stocks at 30 June 1972 were 1,122,796 volumes, comprising circulation stock (including books in public libraries), 799,052 volumes, State Reference Library, 305,363 volumes (including unbound) and Central Music Library, 4,656 books on music and 13,725 scores. The Central Music Library also held 2,314 recordings in stock at 30 June 1972.

*Tasmania.* The Tasmanian Library Board administers the State Library in Hobart, the extension of library services throughout the State and State aid to municipal libraries. State Government expenditure on library services in 1971-72 was \$1,011,025. A regional municipal library system commenced in April 1965 in 5 north-western municipalities, with headquarters in Burnie, and smaller libraries in other large towns and a bookmobile in rural areas. A second regional library system, with headquarters in Launceston, was opened on 1 July 1971. This regional system serves the City of Launceston and nine municipalities on either side of the Tamar estuary. Fourteen southern municipalities are served by 2 bookmobiles based in Hobart and a bookmobile serves schools in the Hobart metropolitan area. At 30 June 1972 the State Library in Hobart held 142,353 reference volumes and 116,833 lending volumes. The Board provided to municipal libraries by way of subsidy 419,008 books out of a total bookstock of 436,249 available for this purpose.

The State Library continued to provide a library of documentary films (4,616) and recorded music (15,827 discs) available for loan throughout the State.

### University libraries

A description of libraries in Australian universities appears on pages 539-41 of Year Book No. 55. The following table shows the number of books and pamphlets held, accessions during the year, and expenditure on libraries for each university. For further information, see annual mimeograph publication *University Statistics—Part 2: Staff and Libraries* (No. 13.8).



## UNIVERSITY LIBRARIES

University	Books and pamphlets (a)	Accessions during year (b)	Expenditure (c)
	'000	'000	\$'000
Sydney . . . . .	1,434	70	1,977
New South Wales . . . . .	678	69	1,418
New England . . . . .	307	15	474
Newcastle . . . . .	192	16	478
Macquarie . . . . .	316	35	758
Melbourne . . . . .	644	33	1,362
Monash . . . . .	489	55	1,595
La Trobe . . . . .	154	24	693
Queensland . . . . .	709	47	1,237
James Cook . . . . .	58	5	251
Adelaide . . . . .	622	28	853
Flinders . . . . .	205	27	527
Western Australia . . . . .	435	26	829
Tasmania . . . . .	248	20	455
Australian National . . . . .	604	49	1,335
<b>Total . . . . .</b>	<b>7,096</b>	<b>518</b>	<b>14,242</b>

(a) 30 April 1972.  
31 December 1971.

(b) Year ended 30 April 1972.

(c) During year ended

## Children's libraries and school libraries

For details of Commonwealth grants for the development of secondary school library services, see pages 673-4 of this chapter.

*New South Wales.* Children's libraries are being developed as departments of municipal and shire libraries. The Education Department maintains a school library service for the fostering of State school libraries, which are maintained partly by parents and citizens associations and partly by departmental subsidy. Secondary and central schools, and an increasing number of primary schools, have teacher librarians.

*Victoria.* The Education Department provides for the building of libraries in secondary and technical schools, and new primary schools with 10 or more classrooms. A subsidy of up to \$11,000 is available to other primary schools for library buildings. Library furniture is provided, establishment grants are given to new schools for the purchase of books, and the Government provides an annual per capita grant to all schools. At June 1972, 525 primary, 254 secondary, and 96 technical schools had central libraries.

*Queensland.* In Queensland, 167 libraries are free to children. The Brisbane City Council conducts 21 of these, also a mobile library to serve eight outlying suburbs, Country children may borrow from the Country Extension Service which has a separate children's collection. The purchase of books for State school libraries in Queensland is financed by school committees and parents associations, with a \$1 for \$1 subsidy from the Department of Education.,

*South Australia.* A children's library of 48,858 volumes is used by school classes and individual children living in the metropolitan area. In 1971-72, 193,667 books were lent. A lending service for young people from thirteen to eighteen years of age has a stock of 18,169 volumes, and in 1971-72, 97,651 loans were recorded.

*Western Australia.* The Education Department provides library services, issues materials and gives library allocations for library resources purchased by government schools. All government high schools are provided with library accommodation and furniture and their libraries are staffed by school librarians according to the size of the school. New high schools are issued with books to a value of \$1,500 in each of their first three years and all high schools receive an annual issue of books and an allocation for book purchases. New primary schools are issued with books to the value of \$200 or \$400 in their first year according to their student enrolments. All government and non-government schools with fifth-year students receive an annual issue of books for matriculation studies. A number of primary schools have organised school libraries in rooms available, or in premises provided by the parents and citizens associations. Some new primary schools are being provided with a resource centre (i.e. a library and an audio-visual aids centre) as part of their construction and these are being progressively added to existing schools. Annual issues of books are made to all government primary schools, varying according to the size of the school, and assistance is provided for the purchase of

library books. The Charles Hadley Travelling Library provides 864 boxes of books which are circulated to all small schools, mission schools, and special classes. Children who are unable to attend school are provided with books from the Correspondence School's library.

*Tasmania.* All the State's municipal libraries have Lady Clark Memorial Children's Libraries. The Lady Clark Memorial Children's Library in the State Library in Hobart has 27,233 books and serves schools in the Hobart metropolitan area by bookmobile. More than 150 schools which are not close to a municipal library have collections of books on loan from the Lady Clark Memorial Children's Section of the Division of External Services of the State Library, which has a stock of 201,343 books. Libraries have been built up in most schools, with Education Department subsidies matching local funds to levels determined by the size of the school. A new Central Library Service Branch offers bibliographic and technical advice on school library development.

### Book publishing

Prior to 1972 the statistics of book publishing in Australia and the External Territories were prepared and published by the Bureau of Census and Statistics from data supplied by the National Library of Australia. For details see Year Book No. 58, page 680-1 and earlier issues.

For 1972 the statistics have been compiled and published by the National Library but they are not comparable with those statistics published by the Bureau for previous years.

#### Number of publications received

The table below shows the number of books and pamphlets (including leaflets), published in Australia in 1972 and received by the National Library up to December 1972, by State and Territory of publication and publisher.

#### AUSTRALIAN BOOKS AND PAMPHLETS PUBLISHED IN 1972(a) BY STATE AND TERRITORY OF PUBLICATION AND PUBLISHER

(Source: *Australian National Bibliography*, National Library of Australia)

							Number of titles p
State or Territory—							
New South Wales	.	.	.	.	.	.	570
Victoria	.	.	.	.	.	.	539
Queensland	.	.	.	.	.	.	80
South Australia	.	.	.	.	.	.	90
Western Australia	.	.	.	.	.	.	50
Tasmania	.	.	.	.	.	.	10
Northern Territory	.	.	.	.	.	.	4
Australian Capital Territory	.	.	.	.	.	.	165
Papua New Guinea	.	.	.	.	.	.	22
Total	.	.	.	.	.	.	1,530
Publisher—							
Commercial	.	.	.	.	.	.	911
Commonwealth Government	.	.	.	.	.	.	148
State Government	.	.	.	.	.	.	167
Local government	.	.	.	.	.	.	31
Society, institution, company, private	.	.	.	.	.	.	273
Total	.	.	.	.	.	.	1,530

(a) Received by the National Library up to December 1972.

### Archives

General interest in archives in Australia was aroused in 1888, when the Colony of New South Wales celebrated its centenary, the occasion being marked by official publication in 1889-1894 of the *History of New South Wales from the Records* by G. B. Barton and A. Britton, and in 1893-1898 of the series of *Historical Records of New South Wales*, edited by A. Britton and F. M. Bladen. Both publications were based on transcripts of documents in London which had been made by Mr James Bonwick, appointed Archivist by the Government of New South Wales in 1884.

In 1902 Mr F. M. Bladen presented to the Commonwealth Government a report on European Archives, in which he recommended the establishment of a Commonwealth Archives Office and the copying of further official records in London. The copying project continued and some of its results were embodied in the volumes of *Historical Records of Australia*, published by the Commonwealth in 1914–1925, under the editorship of Dr J. F. Watson.

Measures for the preservation and storage of original documents were not taken until later years. In the absence of duly constituted archives offices, the various major libraries throughout Australia undertook the collection of historical records, both from official and private sources. An archives department of the Public Library of South Australia was established in 1920, and other institutions formed archives branches in, 1944 (Commonwealth National Library), 1945 (Public Library of Western Australia), 1948 (State Library of Victoria), 1949 (State Library of Tasmania), 1953 (Public Library of New South Wales), and 1959 (State Library of Queensland). Legislation to govern arrangements for official records was passed as follows: South Australia (1925, 1936), Tasmania (1943, 1965), Queensland (1943) and New South Wales (1960). Since 1961, separate authorities for official archives have been established: Commonwealth Archives Office, 1961; Archives Office of New South Wales, 1961; Archives Office of Tasmania, 1965. A Business Archives Council was established in 1954 to co-ordinate activities in the field of company records and a number of firms have established their own archives services. Certain churches have also provided appropriate facilities for ecclesiastical records. Other corporate and private archives continue to be collected by several archives offices, libraries and more recently, universities.

### Commonwealth Archives Office

An account of the development of the Commonwealth Archives Office and a detailed description of its functions appear on pages 543–4 of Year Book No. 55. The Archives Office functions as a central agency for the control of records created by the Commonwealth Government which are no longer required in the day-to-day business of government. At 31 December 1972 the total holdings of the Archives Office throughout Australia amounted to 554,000 shelf feet of records, including 212,000 feet of permanent material, such as files, manuscripts, registers, cards, books, maps, plans, models, paintings, films, photographs, microfilms, recordings and tapes. The Office regulates access to all Commonwealth records, whether in its custody or held by departments, in accordance with the Government's access rules. These provide that, with certain exceptions, Commonwealth records which are 30 years old or more are available on open access to all accredited members of the public. In January 1972 the Government decided that the thirty year access rule should apply to Cabinet papers also; and that because of their special interest, the remainder of the Cabinet papers up to the end of 1945 should be released for public examination. It further decided that departmental papers for this period should become available at the same time as Cabinet papers. The Archives Office provides an advisory service to inquirers, both official and public, on appropriate sources of information for particular topics including material held by the Office itself, by other Commonwealth agencies and elsewhere. During 1971–72 some 322,000 items were lent to departments. The Office carries out searches for departments and provides information from the records in its custody. Some 5,500 requests for these services were received in 1972. In accordance with the Commonwealth Government's access rules, the Office also supplies information to members of the public engaged in academic or other forms of research. Records may be consulted by holders of a search ticket and 459 public search tickets are currently valid. During 1972 inquiries were received from 514 researchers. There were 8,000 daily visits to archives search rooms and repositories by officials and the public, and 57,000 items were produced for consultation.

The headquarters of the Commonwealth Archives Office is in Canberra, and there are branches in Sydney, Melbourne, Brisbane, Adelaide, Perth and Darwin; additional branches are being established in Hobart and Townsville. In 1972 record surveys were conducted in Tasmania, North Queensland, the Northern Territory, Papua New Guinea and Norfolk Island. The Office maintains liaison with similar organisations in overseas countries and is a national member of the International Council on Archives, established under the auspices of UNESCO.

### Archives Office of New South Wales

The Archives Authority of New South Wales is a statutory corporation established under the Archives Act 1960 and has custody and control of the State archives. These are preserved in the Archives Office of New South Wales.

The Act requires that before any public records of the State are destroyed or disposed of, notice must be given to the Archives Authority which may then require any such records to be made available to it. Records transferred to the Authority become State archives and when 30 years old are generally open to holders of a reader's ticket.



The State archives at 31 December 1972 occupied 33,953 feet of shelving. This excludes more than 16,000 maps and plans besides other records which cannot be readily measured. In addition there were about 100,000 feet of permanently valuable records housed mainly in the Government Records Repository.

#### **Archives Office of Tasmania**

The Archives Office of Tasmania operates under the *Archives Act* 1965, No. 47. The statutory authority under the Act is the Tasmanian Library Board. No records of State and local authorities may be destroyed or otherwise disposed of except on the written authority of the Principal Archivist. The holdings of the Archives Office amount to over 12,000 shelf feet (including non-public records).

Three parts of a 'Guide to the Public Records of Tasmania' have been published and five further record groups are being inventoried for publication. A file lending service is conducted for the benefit of departments and authorities which have deposited semi-current records in the Archives Office. Research workers have access to records in the search room and a mail reference service is provided for country and interstate inquirers. A panel of private researchers is available who hire their services to inquirers who wish to undertake prolonged search of documents.

#### **Australian National University Archives**

The Australian National University Archives was established in 1954 when the records of the Australian Agricultural Company were acquired, and in 1959 its collecting activities were expanded to include records of employee organisations. The University now holds a collection of the records of businesses (approximately 135 accessions) and of trade unions (approximately 205 accessions). The aim is to gather primary source material to support advanced research within the University in economic history, history, and political science. Detailed arrangement and description are undertaken and close liaison is maintained with scholars in the Research School of Social Sciences to keep the collecting policy abreast of trends in research. Scholars from other universities are also helped, and reference work is carried out to answer inquiries. The University Archives include deposits which have been microfilmed and pamphlet collections of interest to research workers in political history.

#### **Business Archives Council of Australia**

The Business Archives Council of Australia works for the preservation of business records and promotes the writing of business history. The Council itself does not collect business records. The main collecting centres are the Archives of the Australian National University, the University of New England and University of Melbourne. The Australian National University and the University of Melbourne have strong collections covering a wide range of business activity, and are respectively notable for records of trade unions and mining companies. The University of New England concentrates on rural industries.

### **Botanical and zoological gardens**

In addition to the zoological gardens referred to in the following paragraphs there are numerous privately owned zoos and sanctuaries, many of them at tourist resorts, which maintain collections of Australian flora and fauna. There are also various national parks, forests, reserves, etc., dedicated for public use, which are preserved largely in their natural condition.

#### **New South Wales**

The Sydney Botanic Gardens are situated on the shores of Farm Cove, Sydney Harbour. They occupy sixty-six acres and contain a large collection of flowering plants, shrubs and trees as well as hothouses of orchids and ferns.

The Zoological Gardens at Taronga Park, on the northern side of Sydney Harbour, occupy about seventy acres and contain an aquarium. In 1971-72 admissions to the grounds were 877,681. The receipts of the zoological department of the Taronga Park Trust amounted to \$856,276 in 1971-72 and expenditure was \$748,915. Exhibits at 30 June 1972 comprised 887 mammals, 2,132 birds, 297 reptiles, 54 amphibians and 1,169 fish.

#### **Victoria**

The main botanical gardens in the State are the Royal Botanic Gardens, an area of eighty-eight acres within one mile of the centre of the City of Melbourne, containing over 12,000 species of plants, of which there are some 30,000 individual specimens. Many species of native birds breed on islands in lakes within the gardens. In October 1970, an extension was made to the Royal Botanic Gardens by the purchase of 395 acres at Cranbourne on Mornington Peninsula for purposes of a Botanic Gardens and Research Institute devoted to the growing, display, and study of Australian native plants.

The Zoological Gardens in Royal Park contain a wide selection of animals, birds and reptiles. A wild life sanctuary is also maintained at Healesville.

### **Queensland**

Botanical gardens have been established in Brisbane and in several other cities. The Brisbane Botanic Gardens occupy approximately forty-six acres on the banks of the Brisbane River in the central city area and are noted for their collections of palms, tropical trees and shrubs, and succulents; they contain over 7,500 species.

Initial development has started on a new botanic gardens in the foothills of Mount Coot-tha, about three miles from central Brisbane. The area being developed is approximately 200 acres.

### **South Australia**

The Adelaide Botanic Gardens covers 45 acres and contains collections of Australian and exotic plants from low rainfall and sub-tropical regions. In glasshouses are collections of tropical, ornamental and economic plants. Special collections include cacti and succulents, bromeliads, and begonias. An up-to-date comprehensive botanical and horticultural library is maintained. The State Herbarium, established in 1952, contains about 250,000 specimens.

A 35 acre property at Blackwood, containing a collection of Australian and South African plants and the Mount Lofty Botanic Garden (approximately 180 acres) are being developed and are expected to be opened to the public by the mid-1970's.

The Zoological Gardens, opened in 1883, have an area of approximately 19 acres, and contain a fine collection of animals, reptiles, and birds.

### **Western Australia**

A botanical garden and arboretum for the native plants of Western Australia is in King's Park, a reserve of almost 1,000 acres close to the centre of Perth. The indigenous flora of the State is represented in the Western Australian collection by approximately 1,200 species which have been successfully brought to maturity. Trees native to the southern half of the State are grown as specimens in the arboretum.

Regular field work is undertaken to collect material and carry out botanical exploration. Seed of native plants collected is distributed from surplus stocks to botanical institutions throughout the world and sold to private growers and nurserymen. An annual seed list offers from 1,000 to about 1,200 species. About 13,000 packets of seed are distributed each year.

King's Park undertakes research into the biology of native plants. Apart from purely fundamental aspects, this program has two main purposes: firstly, to bring native plants into cultivation, including the improvement of the varieties grown and the methods of their propagation; secondly, to manage the extensive area of bushland park, which is an increasingly important facility for recreation in the urban environment.

The Zoological Gardens at South Perth have an area of 44 acres and are under the control of the Zoological Gardens Board. Animals, birds and reptiles are exhibited. During the year 1971-72, 366,241 people paid for admission into the zoo and in addition, 3,297 disadvantaged children and adults were admitted free.

### **Tasmania**

The Royal Tasmanian Botanical Gardens adjoining Government House on the Queen's Domain contain a fine collection of exotic trees and shrubs and a small aviary.

There are three, main, privately owned, wildlife sanctuaries and zoos, each with a few exotic animals, at Granton near Hobart, at Punch Bowl near Launceston and at Westbury, 20 miles from Launceston. The Launceston City Council keeps a small collection of animals and birds at City Park.

### **Northern Territory**

The Darwin Botanical Gardens occupy seventy-four acres and feature thirty acres of tropical plants of both native and overseas origin. Four acres are used for an amphitheatre and contain a number of native and exotic plants. The Gardens are controlled by the Corporation of the City of Darwin.

### **Australian Capital Territory**

The Canberra Botanic Gardens on the lower slopes of Black Mountain have been under development since 1950. The gardens are on a 100-acre site and are being developed for the study of the botany, propagation, and cultivation of Australian native plants. The Gardens were opened for public inspection in 1967 and were officially opened in 1970.



The Tidbinbilla Nature Reserve covers 11,500 acres of the Upper Tidbinbilla Valley, about 25 miles from Canberra. Approval for its establishment was given in 1962 and it was declared a Nature Reserve under the Public Parks Ordinance on 27 October 1971. This Reserve has proved a great attraction for visitors with the attendance figure rising from 42,700 in 1967 to approximately 138,000 in 1972. The Jervis Bay Nature Reserve in the Commonwealth Territory of Jervis Bay consists of 10,670 acres of coastal area. Although the area has been managed as a reserve over a number of years, the Reserve was declared on 7 October 1971. Both Tidbinbilla and Jervis Bay Nature Reserves are designed to conserve the indigenous plant and animal communities and to enable the public to see the fauna in their natural habitat.

## SCIENTIFIC AND INDUSTRIAL RESEARCH IN AUSTRALIA

### Background

Scientific research in Australia increased considerably with the outbreak of the 1939–45 War and research activities continued to expand in the period of rapid post-war economic growth. Prior to 1939 Australia's research effort had been oriented towards the biological sciences, but under the stimulus of military requirements, this effort spread to the physical sciences and to problems of industrial technology. Research in the medical and social sciences also increased. With the overall research expansion a growing number of government agencies, both Federal and State, university departments and industrial organisations established scientific programs related to their various areas of interest and responsibility.

Much of the present day research effort is directed towards the development of natural resources and of primary and secondary industries. For information about research in the rural industry and the mineral industry, *see* Chapters 22 and 26 respectively. There is also considerable scientific research effort in the areas of medicine, space, the environment, social sciences, atomic energy, meteorology and oceanography.

### Commonwealth Government

The Commonwealth Government has played a key role in the war time and post-war development of the national scientific effort through programs of research and related scientific activities in its own establishments and in funding scientific activities generally.

Over thirty Commonwealth Government agencies are engaged in research and scientific activities having a wide range of interest including development of natural resources and of primary and secondary industries; health; communications and transport; atomic energy; defence. Details of these activities are contained in annual reports of the individual agencies. A brief description of the research activities of the Department of Supply is given in Chapter 4, Defence.

Through its own agencies the Commonwealth Government engages in extensive research in the area of defence science (for details *see* page 96) Research programs are undertaken to meet Australia's defence needs and to fulfil agreed commitments under international arrangements. Australia has co-operated with allied nations in scientific projects of defence significance, particularly where such projects add to technological development in Australia.

### Commonwealth Scientific and Industrial Research Organization

The Commonwealth Scientific and Industrial Research Organization (CSIRO) is Australia's largest civil scientific body and now has a staff of about 6,400 including some 2,000 professional scientists. Its main function is to carry out scientific research for the primary and secondary industries of the Commonwealth and its Territories. It does not conduct defence research, medical research or atomic energy research. The other powers and functions of CSIRO as defined in the *Science and Industry Research Act 1949*, include:

- training of scientific research workers and the awarding of scientific research studentships and fellowships;
- making of grants in aid of pure scientific research;
- recognition or establishment of associations of persons engaged in any industry, for the purposes of carrying out industrial scientific research and the co-operation with, and the making of grants to, such organisations;
- testing and standardisation of scientific apparatus and instruments and the carrying out of scientific investigation connected with standardisation;
- collection and dissemination of information relating to scientific and technical matters; and
- publication of scientific and technical reports, periodicals and papers.



CSIRO is a statutory corporation operating under its own Act of Parliament and exercising its powers subject to the regulations and the approval of the Minister for Science.

The governing body of the Organization is the Executive, which is located in Canberra and consists of nine members appointed by the Governor-General. There are five full-time members, one of whom is chairman, and four part-time members. At least five of the members must possess scientific qualifications. The Executive is responsible to the Minister for the policy and the work of the Organization.

CSIRO has thirty-six Divisions, each working in some particular area of research such as animal health, tropical pastures or textile physics. Since the Organization's activities are Commonwealth-wide and often involve extensive field work, a number of branch laboratories and field stations have been established in various parts of Australia. The Head Office is in Canberra and Regional Administrative Offices are located at Brisbane, Canberra, Melbourne, and Sydney. The Organization also has an Australian Scientific Liaison Officer in London and Scientific Counsellors in Washington and Tokyo.

The Organization's total budget for 1972-73 was about \$77,500,000. Some four-fifths of this was provided directly by the Commonwealth Government, the remainder being contributed by primary industry, individual companies, Australian and overseas government instrumentalities and private foundations.

### **The Commonwealth Meteorology Research Centre**

The Commonwealth Meteorology Research Centre is a joint agency of the Commonwealth Bureau of Meteorology and the CSIRO Division of Atmospheric Physics, and is located in Melbourne.

The work of the Centre consists of studies of the behaviour of the earth's atmosphere, with emphasis on general circulation, directed towards improvement in understanding the distributions and variations in climate on the earth, and towards improvement in the accuracy and time-scale of weather forecasting. This includes the formulation and testing of numerical hemispheric models and the modelling of circulations of a more regional type. The approach to these problems will, as desirable, develop an interpretation and use of new forms of observational data.

### **Australian Institute of Marine Science**

The Australian Institute of Marine Science, to be established near Townsville, Queensland, over the next five years is one of the most recent ventures in scientific research by the Australian Government. The Institute will give particular attention to the ecology of the Great Barrier Reef and of associated biological systems, and also undertake oceanographic research in the Coral Sea and northern Australian waters.

### **Nuclear energy**

The Australian Atomic Energy Commission is a statutory corporation which functions under the direction of the Minister for Minerals and Energy. It consists of five members. The Commission is responsible for undertaking and encouraging the search for and mining of uranium and is empowered to co-operate with the appropriate authorities of the States in connection with these and related matters. It is authorised to develop the practical uses of atomic energy by constructing and operating plant for this purpose, carrying out research, and generally fostering the advancement of atomic energy technology. A detailed description of its activities is contained on pages 560-562 of Year Book No. 55.

The Australian Institute of Nuclear Science and Engineering comprises the Australian Atomic Energy Commission and Australian universities. The Institute's operations are financed by membership subscriptions and a special Commonwealth Government grant which amounted to \$200,000 in 1972-73. The purpose of the Institute is to stimulate research and training in nuclear science and engineering within the universities and to arrange access for university research workers to the highly specialised equipment at the A.A.E.C. Research Establishment, Lucas Heights, New South Wales.

The Australian School of Nuclear Technology is jointly sponsored by the Commission and the University of New South Wales. Courses are offered in nuclear technology, production and use of radioisotopes, radiological safety, health physics, and other related topics.

### **Nuclear power**

In October 1969 the Commonwealth Government announced a proposal to build a nuclear power station of 500 megawatt capacity at Jervis Bay, on the New South Wales south coast, by 1975, subject to a satisfactory tender. This followed discussions early in 1969 between the Commonwealth and all State Governments. World-wide tenders for the station were called for, and assessed. However, in June 1971, the Government decided to defer a decision for 12 months in the light of Australia's financial circumstances at that time. In June 1972, the Government further deferred a decision on construction of the Jervis Bay nuclear power station for an indefinite period because of developments in the nuclear power industry overseas.

### **Nuclear fuel**

Important discoveries of uranium have recently been made in the Northern Territory. Although their full extent has not yet been determined, early estimates suggest that Australia will become a major producer of uranium.

### **Ionospheric Prediction Service**

The Ionospheric Prediction Service Branch of the Department of Science exists to assist users of radio communications to achieve the most effective and efficient use of radio transmissions which are dependent on or influenced by the ionosphere. The Branch staff make regular measurements of the state of the ionosphere above Australia and its territories and of the sun, and issue both long-term and short-term predictions of the state of the ionosphere as it applies to radio communication situations. To achieve this the Branch must also conduct research into the effects of solar and other geophysical phenomena on the ionosphere and into the subsequent effects on the propagation of radio signals. It performs other functions associated with the above activities including advisory and scientific data services.

## **State governments**

Scientific programs of the six State governments are directed mainly towards agriculture, fisheries, forestry, public health, water supply and power generation, engineering and construction, and areas of the social sciences. These research programs are generally of an applied nature and are related directly to the various responsibilities of the departments and instrumentality concerned. State government research programs extend to such fields as physical and mental health, child welfare, vocational guidance, etc., and represent an important contribution to Australia's overall research effort.

## **Universities**

The fifteen universities in Australia are engaged in an extensive and diverse range of research programs in the physical and earth sciences, medicine, agriculture and biological sciences, and social sciences. University research is mostly of a fundamental character although some university departments are also concerned with applied research directed to the solution of practical problems. In 1959 the Council of the University of New South Wales established a non-profit research and development company, Unisearch Ltd., which provides technical advice and service for both large and small industrial organisations.

The post-war growth of university research has been accompanied by rapid development of post-graduate studies which, prior to the late 1950s, were undertaken mainly overseas. In 1972, 6,862 students were enrolled at Australian universities for higher degrees in science-oriented subjects.

Details of the courses offered in Australian universities together with background information on their teaching and research programs, and a comprehensive summary of general university development in recent years are given in Year Book Number 55, 1969 pages 507-9. The reader should also refer to the handbooks and calendars published by each university.

## **Industry**

An increasing amount of research and development is being undertaken by Australian industries. Firms with major research programs are mainly in the chemical, pharmaceutical, electronic, sugar, paper, mining and steel industries. Several industries have established research institutes or associations.

### **Productivity action in Australia**

Two complementary organisations—the Productivity Group Movement and the Productivity Promotion Council of Australia are specifically concerned with action to improve productivity in Australia. Executive and administrative services are provided by the Department of Labour.

*Productivity Group Movement.* The role of productivity groups is to improve the productivity performance of individual member undertakings. Groups were first formed in New South Wales and Victoria in 1957 and were later established in all States. In April 1973, there were some 250 groups comprising over 5,700 member undertakings throughout the nation.

A group consists of about twenty members whose representatives meet regularly to exchange practical ideas and experiences and to seek improvement in the effectiveness of member's operations. There are three main types of productivity groups: mixed industry groups which bring together



knowledge and experience from a wide variety of fields; single industry groups whose members are in the one industry (for example, printing, transport, timber); and professional type groups comprising people such as production engineers and personnel managers.

In each State there is a Productivity Groups Advisory Council which is a forum for the exchange of ideas among the groups and seeks to serve their common interests. At the national level there is a Productivity Groups National Committee on which each State Council is represented. This Committee publishes a quarterly news magazine for groups, arranges productivity group publications, films and other aids to group operation and develops national themes and group expansion programs.

*Productivity Promotion Council of Australia.* The Productivity Promotion Council of Australia was inaugurated in September 1969. It is concerned with community education in productivity, stimulation of senior management's interest in productivity action and collaboration with employer and employee organisations, and professional bodies in arranging joint activities on factors affecting productivity. It also actively supports the development of the Productivity Group Movement.

Membership of the Council is drawn from organisations, business concerns, government and semi-government bodies and individuals. Finance is provided by members' subscriptions on a sliding scale based on type and size of undertakings.

The Council operates through a National Committee, State Branch Committees and Advisory Panels. The National Committee is composed of nominees from major national employer and employee associations, Commonwealth government departments and a number of individual experts. Branch committees have been established in New South Wales, Victoria, Queensland, South Australia and Western Australia.

### Other research (including joint projects)

#### Antarctic research

Permanent Australian research stations have been established in the Antarctic since 1947, when the Federal Government organised the Australian National Antarctic Research Expeditions (ANARE). The Antarctic Division's budget for 1972-73 was approximately \$3,000,000.

During 1971-72 scientific work continued at Macquarie Island, Davis, Mawson and Casey, and summer bases were occupied at Moore Pyramid and Mount Creswell. Australia's work in the Antarctic region includes surveying, geology, geophysics, meteorology, glaciology, upper-atmosphere physics, cosmic-ray research, zoology, botany and some aspects of medical science.

Basic work in aspects of upper-atmosphere physics and comprehensive meteorological observations are conducted at all stations, and cosmic-ray research of particular interest at high latitudes is carried out at Mawson.

In glaciology, the major work at Casey was the drilling of boreholes to a depth of 100-200 metres at three sites on the local ice cap. Cores were returned to Australia for analyses. During summer, accurately fixed markers were established at eleven sites on the ice surrounding the southern Prince Charles Mountains, 520-830 kilometres south of Mawson. The markers will be re-measured in the future to establish the rate of ice movement. Investigations were made into ice thickness, snow accumulation, oxygen isotopes and sub-surface temperatures.

In biology, studies were conducted on the sea-birds and seals at all stations, and on the terrestrial invertebrates and the biota of the highly saline lakes at Davis. Environmental studies in human physiology were made by medical officers at the ANARE stations. In January 1972, geodetic surveys were conducted in the southern Prince Charles Mountains, using aircraft from a temporary camp in the mountains.

#### Space projects

Australian participation in scientific projects making use of artificial earth satellites began with facilities established as a contribution to the program of the International Geophysical Year (1957-58).

Space tracking stations constructed and operated at a number of sites in Australia through joint arrangements with the United States of America have played an important role in the American manned space flight programs. For details see, page 96.

#### Upper atmosphere

A program of upper atmospheric research using sounding rockets of Australian manufacture is carried out from Woomera by Australian scientists under joint funding arrangements with the United Kingdom. A small annual grant has been made to the University of Adelaide for assistance in this field. The United Kingdom also conducts, at Woomera, a similar program with SKYLARK rockets.



Upper atmospheric research by means of balloons is conducted for Australian and American Universities using the balloon launching facilities made available under a co-operative agreement with the U.S. Atomic Energy Commission. *see*, also page 97.

### Astronomy

One of Australia's significant contributions to scientific endeavour at the international level has been in the fields of optical and radio astronomy. Largely by expertise in these areas Australia plays a significant role in international space research. Programs in optical astronomy have been in progress for many years. However, the growth of radio astronomy has occurred mainly since the 1939-45 War.

*Mount Stromlo and Siding Spring Observatory.* The astronomical research facilities of the Australian National University are located at Mount Stromlo (Canberra) and Siding Spring Mountain (Coonabarabran). The staff of the observatory are academic staff of the University's Institute of Advanced Studies and the permanent headquarters are located at Mount Stromlo, together with the library, laboratories and offices of the scientific staff. The older telescopes are located on Mount Stromlo, the newer ones on Siding Spring Mountain.

The observatory is the principal centre of optical astronomical research in the southern hemisphere. The research facilities are second only to the great observatories of the south-western United States, and because of their latitude observations can be made on parts of the sky permanently inaccessible to northern astronomers. The functions of the observatory are to carry out original investigations (both observational and theoretical) in astronomy and astrophysics, and to provide post-graduate training for future Australian astronomers.

The direction of the research conducted depends on the steadily widening interests of the staff and scholars as the subject of astronomy itself rapidly progresses. Areas of permanent interest to which the observatory has made important contributions include the evolution of stars and of stellar systems, the study of the Magellanic clouds and their globular star clusters, the chemical composition of the stars and the study of pulsating stars. The results of the work carried out at the observatory are published in international scientific periodicals, principally in the *Monthly Notices of the Royal Astronomical Society* and the *Astrophysical Journal*.

Mount Stromlo is situated at 35° 19' 16" south latitude and 149° east longitude at an altitude of 2,560 feet. It is the summit of a ridge of low hills in the Australian Capital Territory seven miles west of the city of Canberra. The first regular scientific work was started at this site in 1925, and the facilities were incorporated in the Australian National University in 1957. The main instruments are 30-inch, 50-inch, and 74-inch reflecting telescopes and associated spectrographs, photometers and spectral scanners.

The Siding Spring astronomical site was established in 1965. It is located at 31° 16' south latitude and 148° 41' east longitude at an altitude of 3,820 feet and occupies the summit of Siding Spring Mountain in the Warrumbungle Ranges, near Coonabarabran, New South Wales. This site has some of the best environmental conditions for astronomical research to be found anywhere in Australia—considerably better than at Mount Stromlo.

*The Anglo-Australian telescope project.* Early in 1967, the United Kingdom and the Australian Government agreed to collaborate in the construction and operation of a 150-inch optical telescope to be located at Siding Spring (and quite separate from the existing Australian National University facilities). The *Anglo-Australian Telescope Agreement Act* 1970 established the Anglo-Australian Telescope Board in February 1971 and this Board is the constructing and operating authority. The new instrument, which is scheduled to come into regular operation at the end of 1974, will be one of the largest optical telescopes in the southern hemisphere. It will play an important part in complementing the work of the existing 210 feet radio telescope located at Parkes (New South Wales).

### Agreement with United States of America

In the fields of civil science a formal agreement with the United States relating to scientific and technical co-operation was signed in October 1968. This agreement was to broaden and expand already existing co-operation between the Australian and American civilian scientific communities by providing additional channels for scientific collaboration in the civil field between the two countries. Since the signing of the agreement, co-operative research activities have been arranged in a number of fields including atmospheric sciences, arid lands research, problems of drug dependence, photosynthesis and biomedical research.

During 1972 three binational seminars were organised, and a collaborative research project in nuclear physics was also arranged under the Agreement. Planning for a number of other projects was well advanced at the end of 1972.

### Membership of the Association for Science Co-operation in Asia (ASCA)

The Association for Science Co-operation in Asia (ASCA) was formed in 1970 in consequence of an initiative taken by the Philippines. Australia participated in the organisational meeting in November 1970, and in the Association's first meeting in March 1972, both meetings were held in Manila. The second meeting was held in Tokyo in March 1973.

The following countries are at present members of ASCA: Australia, Bangladesh, India, Indonesia, Japan, Khmer Republic, Korea, Malaysia, New Zealand, Pakistan, the Philippines, Singapore, Sri Lanka, Thailand, Viet-Nam.

The objectives of this Association are to exchange information on national resources and research programs, to identify areas of common scientific and technological interest, and to examine means for providing solutions to priority problems on a bilateral or multilateral basis through the resources and facilities of existing inter-governmental agencies (e.g. UNESCO) or through other means. Improvement of the welfare of nations in the ASCA region through this close-co-operation is a major goal of the Association.

The Australian Government has declared its intention of participating fully in international science and technology, and it will assist the developing nations to raise the standards and scope of their scientific and technological research programs. Some of this contribution will be made under the general aegis of ASCA. The Australian Department of Science is the ASCA correspondent Science Agency for Australia.

### Funding of Scientific Research in Australia

A substantial proportion of the Australian Government's overall financial support for research in Australia is devoted to research carried out within the Government's own agencies. In addition, the Australian Government has established a number of fund granting schemes to promote research which is carried out in other sectors of the economy.

For example, support for research in the natural and social sciences and in the humanities is provided through the *Australian Research Grants Committee* which was established in 1965. The majority of the research supported under this scheme is carried out in the universities. Funds for allocation by the Committee are \$20 million for the 1973-75 triennium. Of this amount \$17 million is for upper atmosphere research, \$0.9 million for research in marine science, \$0.65 million for multi-disciplinary research and \$0.55 million for the purposes and operation of a high resolution nuclear magnetic resonance spectrometer. A brief description of the history and activities of the Australian Research Grants Committee is given on page 668.

For over 30 years Australian Government moneys have been allocated by the *National Health and Medical Research Council* for the support of medical research.

The Government, through the *Industrial Research and Development Grants Act 1967-1972*, provides a general incentive to Australian manufacturing and mining companies to increase the level of their expenditure on research and development, as a means of improving products and processes throughout Australian secondary industry.

Companies employing professional research staff are assisted in their own research and development, but the Act also provides for companies to contract research and development with approved research organisations.

Under the legislation, which is administered by the Australian Industrial Research and Development Grants Board, grants in excess of \$44 million had been paid to 931 Australian companies to 30 June 1972. Special taxation concessions may also apply to expenditure on buildings, plant and equipment used solely for scientific research purposes.

The Australian Government also contributes to *Research Trust Funds* which obtain portion of their revenue from levies on production by particular industries. Allocations are made from these trust funds for research in several primary industries.

A recently completed survey, project SCORE (Survey and Comparisons of Research Expenditure) was aimed at the collection of comprehensive information on financial and man-power resources devoted to scientific research and development in Australia. Data had been collected on the research and development (R and D) in both natural and social sciences from four sectors of the economy—government, business enterprise, higher education and private non-profit—for the year 1968-69. (The business enterprise sector had been dealt with by the then Department of Trade and Industry, the other sectors by the Department of Science). The survey provides information on the distribution of R and D expenditure between the fields of science, the source of funds for R and D, the nature of expenditure, as well as on man-power. The analysed and now published information is comparable with similar data collected by other countries and is expected to be of considerable value and importance to those concerned with the management and planning of science and technology in Australia.



## Scientific societies

### Royal Societies

The following table contains the latest available statistical information about the Royal Societies in each State.

ROYAL SOCIETIES, DECEMBER 1972

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>
Year of charter . . . . .	1866	1859	1884	1880	1913	1844
Number of members . . . . .	353	616	280	300	265	583
Volumes of transactions issued(a) . . . . .	105	115	83	96	61	106
Number of books in library . . . . .	40,801	33,500	77,000	30,000	8,900	37,600
Societies on exchange list . . . . .	396	336	335	373	248	293

(a) Cumulative total.

### Australian Academy of Science

The Australian Academy of Science is the national institution representing science in Australia. Constituted by Royal Charter in 1954, the Academy promotes scientific knowledge and research, maintains standards of scientific endeavour and achievement in the natural sciences in Australia, and recognises outstanding contributions to the advancement of science. The Academy represents Australian science and scientists at the national and international level, co-ordinates Australian contributions to international co-operative scientific ventures, organises meetings of scientists, holds symposia, and arranges for visits of scientists from other countries to Australia, administers research fellowships provided by industry and prepares reports on matters of national importance.

Its Fellows (designated F.A.A.) are eminent in some branch of the physical or biological sciences in Australia, occupying professional positions in universities, the Commonwealth Scientific and Industrial Research Organization, other research organisations, and industry. A few places are reserved for Fellows who have rendered conspicuous service in the cause of science. No more than nine new Fellows are elected in any one year. Its present membership is 156 Fellows.

The Academy is financed by general and special purpose grants from the Commonwealth Government and from private sources. The academy is managed by an elected council comprising a president, treasurer, three secretaries and ten ordinary members who are drawn equally from the physical sciences and biological sciences. Chief administrative officer is the Executive Secretary, who is not a Fellow. Its conference centre and principal offices are in Canberra.

### Australian and New Zealand Association for the Advancement of Science (ANZAAS)

This Association was founded in 1887. Its objects are 'the advancement of science and scholarship through the communication of knowledge and the promotion of a spirit of co-operation among scientific workers, scholars and those in sympathy with science and scholarship generally, especially in Australia, New Zealand and the Australian Territories.' The 45th ANZAAS Congress was held in Perth, 13 to 17 August 1973. Further ANZAAS Congresses are set down for Canberra, January 1975, Hobart 1976, Melbourne 1977, New Zealand 1979 and Adelaide 1980.

The ANZAAS Central Office is in Sydney and Divisions operate in New South Wales, Victoria, South Australia, Western Australia, Papua New Guinea, the Australian Capital Territory, New Zealand and Queensland.

### Other scientific societies

There are more than 200 other learned societies devoted to the study of particular sciences. Some of these, including the Royal Australian Chemical Institute and the Institution of Engineers, Australia, are qualifying bodies, admission to which is by qualification only. Others, such as the Institute of Food Technologists, are open to any interested person. Some societies, such as the Australian Biochemical Society, have annual symposia of a very high standard. A great many of these bodies publish appropriate journals.

The Australian Academy of the Humanities is concerned with the advancement of scholarship and of interest in an understanding of Language, Literature, History, Philosophy and the Fine Arts.

The Academy of the Social Sciences in Australia encourages the advancement of the social sciences in Australia and acts as the Australian member of international non-governmental organisations concerned with social sciences.



## CHAPTER 20

# EMPLOYMENT AND UNEMPLOYMENT

Further detail on subjects dealt with this chapter is contained in the *Labour Report* (6.7) and other publications of this Bureau. For subjects relating to population censuses reference should be made to the series of mimeographed and printed publications listed in the *Publications of the Commonwealth Bureau of Census and Statistics* (1.8). Detailed information on the labour force and on employment and unemployment is contained in mimeographed bulletins *The Labour Force* (6.22) and *Employment and Unemployment* (6.4). Current information is also available in the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5), and the *Quarterly Summary of Australian Statistics* (1.3), and preliminary employment estimates are issued in a monthly statement *Employed Wage and Salary Earners* (6.12).

### THE LABOUR FORCE

This chapter contains a number of series relating to the labour force and its components. The labour force comprises two categories of persons: those who are employed and those who are unemployed. In the first category are included employers, self-employed persons, wage and salary earners, and unpaid helpers. Comprehensive details for each State and Territory and for Australia as a whole in respect of persons in the labour force, classified according to industry, occupation and occupational status (i.e. whether employers, self-employed persons, wage and salary earners or unpaid helpers) and personal characteristics such as age, sex, marital status and birthplace, are obtained only at a general census of population. Information about the labour force questions in the population census of June 1971 and a table showing the industry and occupational status of the labour force are given on this and the following two pages.

In the periods between population censuses, estimates of the labour force for the whole of Australia are obtained through the population survey, which is carried out by means of personal interviews at a sample of households throughout Australia in February, May, August and November each year (see pages 705–16). The survey provides, in addition to particulars of the demographic composition of the labour force, broad estimates of occupational status, occupation, industry and hours of work.

Detailed industry estimates for each State and Territory are obtained only in respect of wage and salary earners, through a monthly collection from employers. These estimates, which exclude employees in agriculture and private domestic service, are based on benchmarks derived from the population census, and other data but they do not agree exactly with census figures at relevant dates, partly because of a different method of allocating employees to industries. Further information about estimates of employed wage and salary earners, and in particular the reason for differences between estimates and census data, is given on pages 720–1.

### The population census

#### General

For the 1971 Census of Population and Housing the term 'labour force' is used in place of 'work force' in conformity with the Bureau's quarterly population survey and with international usage.

The labour force is defined as those persons aged 15 years and over who answered 'yes' to any of the following questions on the 1971 Census schedule:

- (a) Did this person have a full or part-time job, or business or farm of any kind last week?
- (b) Did this person do any work at all last week for payment or profit?
- (c) Was this person temporarily laid off by his employer without pay for the WHOLE of last week?
- (d) Did this person look for work last week?

Thus the labour force comprises those persons who worked, those who had a job from which they were temporarily absent, those who were temporarily laid off without pay for the whole of the reference week and those who did work, did not have a job and were actively looking for work.

Persons helping but not receiving wages or salary who usually worked less than 15 hours a week are excluded from the labour force. Bonded trainees (including trainee teachers) and cadets engaged in full-time study at educational institutions are also excluded, even though such institutions were conducted by their employer.

The unemployed members of the labour force are those persons who answered 'No' to questions (a) and (b) and 'Yes' to question (d) and those who answered 'Yes' to question (a), 'No' to question (b) and 'Yes' to question (c). Thus the unemployed consist of those who did no work during the reference week and either looked for work (having no job) or were temporarily laid off from a job.

This approach conforms closely to the recommendations of the Eighth International Conference of Labour Statisticians held in Geneva in 1954 and to the approach used at the 1966 Census.

According to the definition any labour force activity during the previous week, however little results in the person being counted in the labour force.

Thus many persons whose main activity is not a labour force one (e.g. housewife, full-time student) are drawn into the labour force by virtue of part-time or occasional labour force activity in the previous week. Answers to the questions on usual major activity indicate that there were substantially more of such persons at the Census of 1971 than at the Census of 1966 and that they were predominantly females.

On the other hand, the definition excludes persons who may frequently or usually participate in the labour force but who in the previous week happened to have withdrawn from the labour force. Answers to the question on usual major activity indicate that there were substantially more of such persons at the 1971 Census than at the 1966 Census, especially among males.

A similar definition of the labour force is used in the quarterly population sample survey conducted by the Bureau by the method of personal interview. This survey is used to measure changes in the labour force from quarter to quarter in the intercensal period.

Evidence from post-enumeration surveys and pilot tests indicates that the personal interview approach tends to identify a larger number of persons as in the labour force than does the filling in of the census questions on the schedule by the householder and that this tendency has increased between the 1966 and 1971 Censuses.

The above considerations should be borne in mind if comparisons of the total labour force or labour force participation rates are made between the 1966 and 1971 Censuses, or between the 1971 Census and the 1971 labour force quarterly estimates, or if the 1971 Census figures for wage and salary earners are compared with estimates of employed wage and salary earners shown on pages

#### Occupational status, employment status and labour force status

At the 1971 Census the terms *occupational status*, *employment status* and *labour force status* were used, and the relationship between these terms is illustrated by the following classifications.

<i>Occupational status</i>	<i>Employment status</i>	<i>Labour force status</i>
Employer . . . . .	Employed	In the labour force
Self-employed . . . . .		
Employee . . . . .		
Helper . . . . .		
Looking for first job . . . . .		
Other unemployed . . . . .	Unemployed	Not in the labour force
Not in the labour force . . . . .		
	Not in the labour force	Not in the labour force

Prior to the 1971 Census unemployed persons were classified according to their last job held. For the 1971 Census however, details of occupation and industry were sought only in respect of *employed* persons.

### Occupation

Occupation is defined as the type of work performed by an employed person and should not be confused with the type of productive activity, business or service carried out by the establishment in which a person works, e.g. a carpenter employed by a steel-making establishment would have the occupation of 'carpenter' and industry 'steel manufacture'; an electrician working at an oil refinery would have the occupation of 'electrician' but his industry would be that of 'oil refining' (see Industry).

In accordance with the International Standard Classifications of Occupations the structure of the Australian classification used for the 1971 and previous censuses is based primarily on the nature of the work done. The 1971 classification was prepared from the International Standard Classification of Occupations 1958 (revised 1966). The changes in the revised classification were given careful consideration in the preparation of the 1971 Australian classification. A number of new entries have been created to maintain convertibility to the international classification and others created to give more precise codes in certain occupation groups.

### Industry

Industry is defined as the branch of productive activity, business or service carried out by the establishment in which a person is employed.

For the 1971 Census the classification of industry was based on the *Australian Standard Industrial Classification* Preliminary Edition (ASIC). For the purposes of the population census an 'undefined' category was added, where appropriate, to individual divisions, subdivisions and groups of the classification to facilitate the coding of imprecise or generalised descriptions of industrial activities on the census schedules.

At the 1966 and previous Censuses, industry was determined from the respondent's own stated description of the 'kind of industry, business or service' in which he worked. With the adoption of ASIC for the 1971 Census comparability with previous censuses is greatly impaired, not only because of changes in the classification itself but also because in 1971 the industry coding in general was not determined from the stated description. Instead the name and address of the establishment at which the respondent worked, in general, provided the industry code for employees of that establishment. However, in a number of cases, owing to deficient replies concerning name and address of employer or because the establishment had not been pre-coded for industry, recourse still had to be made in coding to the respondent's own description of the industry in which he worked.



**EMPLOYED POPULATION(a), INDUSTRY BY OCCUPATIONAL STATUS  
AUSTRALIA, CENSUS 30 JUNE 1971**

Industry (division)	Occupational Status				Total	Population of total (per cent)
	Employer	Self-employed	Employee (on wage or salary)	Helper (unpaid)		
MALES						
Agriculture, forestry, fishing, and hunting	52,681	139,286	120,951	5,300	318,218	8.87
Mining	436	1,566	68,349	96	70,447	1.96
Manufacturing	14,818	11,315	876,910	231	903,274	25.19
Electricity, gas and water	36	28	83,685	1	83,750	2.34
Construction	31,074	40,516	320,024	194	391,808	10.92
Wholesale and retail trade	62,243	48,403	489,315	750	600,711	16.75
Transport and storage	10,025	24,111	204,131	132	238,399	6.65
Communication	29	102	78,184	1	78,316	2.18
Finance, insurance, real estate and business services	18,263	12,200	174,766	190	205,419	5.73
Public administration and defence			214,219		214,219	5.97
Community services	11,526	3,350	207,249	1,331	223,456	6.23
Entertainment, recreation, restaurants, hotels and personal services	14,218	11,717	83,231	304	109,470	3.05
Other and not stated	2,443	7,828	137,658	1,110	149,039	4.16
Total males employed	217,792	300,422	3,058,672	9,640	3,586,526	100.00
FEMALES						
Agriculture, forestry, fishing, and hunting	11,888	27,182	19,916	9,203	68,189	4.12
Mining	52	84	5,416	24	5,576	0.34
Manufacturing	3,657	3,846	304,308	533	312,344	18.89
Electricity, gas and water	7	4	7,490	1	7,502	0.45
Construction	2,779	1,564	15,575	503	20,421	1.23
Wholesale and retail trade	24,879	25,954	333,214	3,330	387,377	23.42
Transport and storage	1,413	1,790	29,806	305	33,314	2.01
Communication	17	81	25,068	3	25,169	1.52
Finance, insurance, real estate and business services	2,058	3,733	151,897	311	157,999	9.55
Public administration and defence			68,933		68,933	4.17
Community services	2,014	4,536	330,936	3,707	341,193	20.63
Entertainment, recreation, restaurants, hotels and personal services	10,391	7,110	139,280	1,260	158,041	9.56
Other and not stated	491	1,753	62,459	3,141	67,844	4.10
Total females employed	59,646	77,637	1,494,298	22,321	1,653,902	100.00
PERSONS						
Agriculture, forestry, fishing, and hunting	64,569	166,468	140,867	14,503	386,407	7.37
Mining	488	1,650	73,765	120	76,023	1.45
Manufacturing	18,475	15,161	1,181,218	764	1,215,618	23.20
Electricity, gas and water	43	32	91,175	2	91,252	1.74
Construction	33,853	42,080	335,599	697	412,229	7.87
Wholesale and retail trade	87,122	74,357	822,529	4,080	988,088	18.86
Transport and storage	11,438	25,901	233,937	437	271,713	5.18
Communication	46	183	103,252	4	103,485	1.97
Finance, insurance, real estate and business services	20,321	15,933	326,663	501	363,418	6.93
Public administration, defence			283,152		283,152	5.40
Community services	13,540	7,886	538,185	5,038	564,649	10.77
Entertainment, recreation, restaurants, hotels and personal services	24,609	18,827	222,511	1,564	267,511	5.10
Other and not stated	2,934	9,581	200,117	4,251	216,883	4.14
Total persons employed	277,438	378,059	4,552,970	31,961	5,240,428	100.00

(a) Persons who, during the week prior to the census were unemployed or who were classified as 'not in the labour force', are not included in this table.

## EMPLOYED POPULATION(a), BY OCCUPATION, AUSTRALIA: CENSUS 30 JUNE 1971

<i>Occupation (major group)</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Proportion of total</i>
Professional, technical and related workers . . .	309,329	227,179	536,508	10.24
Administrative, executive and managerial workers .	306,842	42,032	348,874	6.66
Clerical workers . . . . .	300,712	529,696	830,408	15.85
Sales workers . . . . .	217,991	203,895	421,886	8.05
Farmers, fishermen, hunters, timber getters and related workers . . . . .	341,128	62,778	403,906	7.71
Miners, quarrymen and related workers . . . .	33,797	90	33,887	0.65
Workers in transport and communication . . .	251,033	39,757	290,790	5.55
Tradesmen, production-process workers and labourers, n.e.c. . . . .	1,456,850	223,841	1,680,691	32.07
Service, sport and recreation workers . . . .	144,371	243,191	387,562	7.39
Members of armed services . . . . .	62,605	2,591	65,196	1.24
Occupation inadequately described or not stated .	161,868	78,852	240,720	4.59
<b>Total employed . . . . .</b>	<b>3,586,526</b>	<b>1,653,902</b>	<b>5,240,428</b>	<b>100.00</b>

(a) Persons who, during the week prior to the census, were unemployed or who were classified as 'not in the labour force', are not included in this table.

### The population survey

The population survey is the general title given to the household sample survey carried out in February, May, August and November of each year in all States and Territories. Emphasis in the survey is placed on the collection of data on demographic and labour force characteristics, the principal survey component being referred to as the labour force survey. The remaining part of the population survey consists of supplementary collections which are carried out from time to time in conjunction with the labour force survey.

The population survey is based on a sample of dwellings selected by area sampling methods. Information is obtained each quarter from the occupants of selected dwellings by carefully chosen and specially trained interviewers during a four-week period on each occasion. Prior to the reselection of the sample in 1972 (using data from the 1971 Census of Population and Housing), the sample framework was extensively redesigned with a view to improving its efficiency, thus enabling economies to be made in the overall size of the sample. There are now about 27,000 households in the sample, representing two-thirds of one per cent of all households in Australia.

A description of the labour force survey and a selection of principal statistics obtained from it are given in this section. Data from supplementary surveys are published in mimeographed bulletins which are available on request. Results of the principal surveys have been published in earlier issues of the Year Book. This chapter contains the results of a survey of leavers from schools, universities or other educational institutions, February 1973. Results of a survey covering ex-service personnel and their dependants conducted in November 1971 are shown in Chapter 5, Repatriation, pages 112-4.

### The labour force survey

The labour force survey commenced in November 1960, and until November 1963 it was confined to the six State capital cities. The first survey for the whole of Australia was carried out in February 1964. Estimates are published quarterly in the mimeographed bulletin *The Labour Force* (6.20). More comprehensive statistics have been published in special bulletins entitled *The Labour Force* (6.22), covering the period 1964 to 1968, and single years thereafter.

The survey includes all persons fifteen years of age and over (including full-blood Aborigines), except members of the permanent armed forces, national servicemen enlisted in the Regular Army Supplement and certain diplomatic personnel customarily excluded from census and estimated populations.

The classification used in the survey conforms closely to that recommended by the Eighth International Conference of Labour Statisticians held in Geneva in 1954. In this classification, the labour force category to which an individual is assigned depends on his actual activity (i.e. whether working, looking for work, etc.) during a specified week, known as 'survey week,' which is the week

immediately preceding that in which the interview takes place. The interviews are carried out during a period of four weeks, so that there are four survey weeks in each of the months to which the survey relates. These survey weeks generally fall within the limits of the calendar month.

A person's activity during survey week is determined from answers given to a set of questions specially designed for this purpose. The principal categories appearing in the tables in this section are the employed and unemployed, who together constitute the labour force, and the remainder, who are classified as not in the labour force. Definitions of these categories are as follows:

- (i) *The labour force* comprises all persons who, during survey week, were employed or unemployed as defined in (ii) and (iii) below.
- (ii) *Employed persons* comprise all those who, during survey week,
  - (a) did any work for pay, profit, commission or payment in kind, in a job or business, or on a farm (including employees, employers and self-employed persons), or
  - (b) worked fifteen hours or more without pay in a family business (or farm), or
  - (c) had a job, business or farm, but were not at work because of illness, accident, leave, holiday, production hold-up due to bad weather, plant breakdown, etc., or because they were on strike.
- (iii) *Unemployed persons* comprise all those who, during survey week, did no work at all, and who either,
  - (a) did not have a job or business and were actively looking for work (including those who stated that they would have looked for work if they had not been temporarily ill or believed no work was available, or had not already made definite arrangements to start work in a new job after survey week); or
  - (b) were laid off from their jobs without pay for the whole week.

A person who either lost his job or was laid off during survey week, but did some work at his job during that week, is classified as employed.

- (iv) *Persons not in the labour force* are all those who, during survey week, were not in the categories 'employed' or 'unemployed' as defined. This category therefore includes persons without a job, business or farm who were not actively looking for work, and who, during survey week, were either keeping house (unpaid), attending an educational institution (e.g. school or university), retired or voluntarily idle, permanently unable to work or inmates of institutions. A person who worked less than fifteen hours without pay in a family business during survey week is also classified as not in the labour force.

Figures of total population fifteen years of age and over for each sex are derived from the official population estimates, which in turn are based on results of population censuses. Figures of marital status and all labour force characteristics of these populations are derived from the sample survey data. For this and other reasons, including differences in timing, methods of collection (personal interview in the survey, self-enumeration in the census) and, in some cases, concepts and definitions, the survey estimates of marital status and labour force characteristics may not agree closely with the corresponding census figures.

Estimates of total population, revised on the basis of the 1971 Census of Population, indicate that the estimates that were used for the population surveys in mid-1971 were, overall, some 55,000 persons too high. The revised estimates classified by age, which are necessary to enable the revision of labour force estimates to be carried out, are not yet available. Caution should be exercised in using the estimates in this Year Book as indicators of long-term change. A preliminary assessment of the effect of the revised population estimates indicates that it will be necessary to reduce the level of the estimated labour force from mid-1971 onwards by about 28,000 persons (mostly males). Successively smaller revisions will be made to the estimates for earlier periods back to mid-1966.

Industry estimates published in previous issues of the Year Book were based on the Classification and Classified List of Industries used at the 1961 and 1966 population censuses. Industry is now coded by use of the Australian Standard Industrial Classification (ASIC). Industry estimates shown in this issue for May 1973 are, therefore, not strictly comparable with those shown in earlier issues.



**Reliability of the estimates**

Since the estimates which appear in the following tables are based on a sample, they may differ from the figures that would have been obtained from a complete census using the same questionnaires and procedures. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because only a sample, and not the whole population, was enumerated. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors.

Space does not allow for the separate indication of the standard errors of all estimates in this section. A table of standard errors which is intended to be of general application is therefore given below.

The standard errors in the table are averages based on calculations for a limited number of surveys and are also averages over a wide range of labour force characteristics. These figures thus give not a precise measure but an indication of the magnitude of the standard error of any particular estimate for any particular survey. An example of the use of the table is as follows: if the estimate obtained from the sample is 100,000 and the standard error is 3.1 per cent of the estimate, i.e. 3,100, there are about two chances in three that the true figure is within the range 96,900 to 103,100 and about nineteen chances in twenty that this figure is within the range 93,800 to 106,200.

**STANDARD ERRORS OF QUARTERLY ESTIMATES**

<i>Size of estimate (persons)</i>	<i>Approximate standard error of estimates</i>	
	<i>Persons</i>	<i>Percentage of estimate</i>
4,000	800	20.0
5,000	900	18.0
10,000	1,180	11.8
20,000	1,560	7.8
50,000	2,300	4.6
100,000	3,100	3.1
200,000	4,200	2.1
500,000	6,000	1.2
1,000,000	8,000	0.8
2,000,000	10,000	0.5

The standard errors of estimates relating to agricultural employment are generally somewhat higher than the standard errors of other estimates of the same magnitude. Estimates for females also tend to have higher standard errors relative to estimates of equivalent size for males in similar employment categories.

The reliability of an estimated percentage, computed by using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the denominator. Percentages quoted in the following tables, and any other percentages calculated from figures shown, have generally somewhat lower proportional standard errors than have the estimates which form the numerators of the percentages, particularly where the percentages are large.

As the standard errors in the table show, the smaller the estimate the higher is the relative standard error. Very small estimates would thus be subject to such high standard errors (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In the following tables, estimates less than 4,000 have not been shown. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of imperfections in reporting by interviewers and respondents. Inaccuracies of this kind are referred to as the non-sampling error, and they may occur in any enumeration, whether it be a full count or only a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers and efficient operating procedures.

**CIVILIAN POPULATION 15 YEARS OF AGE AND OVER(a), BY EMPLOYMENT STATUS  
AUSTRALIA**

May—	Employed(b)			Unemployed(b)		Total labour force(b)		Not in labour force(b) (c'000)	Civilian population aged 15 and over (a) (c'000)	
	Agri- culture (c'000)	Other industries (c'000)	Total (c'000)	Number (c'000)	Per cent of labour force	Number (c'000)	Per cent of popu- lation(c)			
MALES										
1969 . . .	350.8	3,193.6	3,544.4	35.4	1.0	3,579.8	83.3	715.1	4,294.9	
1970 . . .	352.5	3,278.3	3,630.8	33.9	0.9	3,664.7	83.4	731.5	4,396.2	
1971 . . .	341.9	3,342.2	3,684.1	44.0	1.2	3,728.1	82.9	767.1	4,495.2	
1972 . . .	345.3	3,371.3	3,716.6	61.0	1.6	3,777.6	82.5	800.1	4,577.7	
1973 . . .	309.4	3,453.7	3,763.1	50.7	1.3	3,813.8	82.0	839.0	4,652.8	
MARRIED WOMEN										
1969 . . .	40.7	835.8	876.6	23.2	2.6	899.7	31.4	1,964.0	2,863.7	
1970 . . .	49.9	912.6	962.5	22.0	2.2	984.5	33.5	1,958.4	2,943.0	
1971 . . .	50.3	990.2	1,040.4	24.1	2.3	1,064.5	35.2	1,962.3	3,026.8	
1972 . . .	51.7	1,012.8	1,064.5	27.8	2.5	1,092.3	35.2	2,011.8	3,104.1	
1973 . . .	54.5	1,099.9	1,154.4	25.9	2.2	1,180.3	37.3	1,980.8	3,161.1	
OTHER FEMALES(d)										
1969 . . .	11.5	689.9	701.4	16.5	2.3	717.9	48.1	774.5	1,492.4	
1970 . . .	14.2	706.7	720.9	15.6	2.1	736.5	48.6	778.3	1,514.8	
1971 . . .	11.6	706.5	718.0	14.6	2.0	732.6	47.9	797.8	1,530.4	
1972 . . .	11.1	670.2	681.2	21.4	3.0	702.6	45.6	839.4	1,542.0	
1973 . . .	10.5	672.9	683.4	23.6	3.3	707.0	45.1	859.1	1,566.1	
ALL FEMALES										
1969 . . .	52.3	1,525.7	1,578.0	39.7	2.5	1,617.6	37.1	2,738.5	4,356.1	
1970 . . .	64.1	1,619.2	1,683.4	37.7	2.2	1,721.1	38.6	2,736.7	4,457.8	
1971 . . .	61.8	1,696.6	1,758.4	38.7	2.2	1,797.1	39.4	2,760.1	4,557.2	
1972 . . .	62.8	1,683.0	1,745.8	49.2	2.7	1,794.9	38.6	2,851.2	4,646.1	
1973 . . .	65.0	1,772.8	1,837.8	49.5	2.6	1,887.3	39.9	2,839.9	4,727.2	
PERSONS										
1969 . . .	403.1	4,719.3	5,122.4	75.1	1.4	5,197.4	60.1	3,453.6	8,651.0	
1970 . . .	416.7	4,897.5	5,314.2	71.5	1.3	5,385.8	60.8	3,468.2	8,854.0	
1971 . . .	403.7	5,038.8	5,442.5	82.7	1.5	5,525.1	61.0	3,527.3	9,052.4	
1972 . . .	408.1	5,054.3	5,462.4	110.2	2.0	5,572.6	60.4	3,651.2	9,223.8	
1973 . . .	374.4	5,226.5	5,600.9	100.2	1.8	5,701.1	60.8	3,678.9	9,380.0	

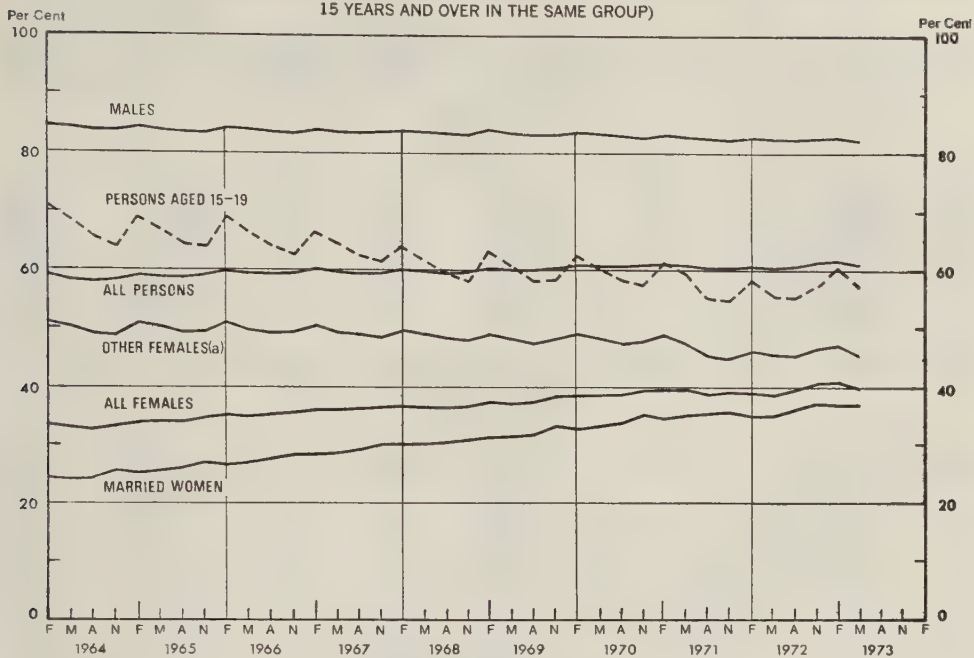
(a) For a note on persons excluded see explanatory notes on page 705. (b) For definitions see page 706. (c) The labour force in each group as a percentage of the civilian population aged 15 years and over in the same group (labour force participation rate). (d) Never married, widowed and divorced.

NOTE. Discontinuity indicated by horizontal line. At the 1971 population census, trainee teachers were for the first time classified as not in the labour force. They have been likewise excluded from the labour force estimates from August 1971. In consequence there is now a break in the labour force series between May and August 1971, the numbers of males and females excluded being approximately 7,000 and 17,000 respectively.

Discontinuity between 1972 and 1973 has been caused by a change in the basis of industry coding. Industry is now being coded according to the Australian Standard Industrial Classification (ASIC). See page 706.

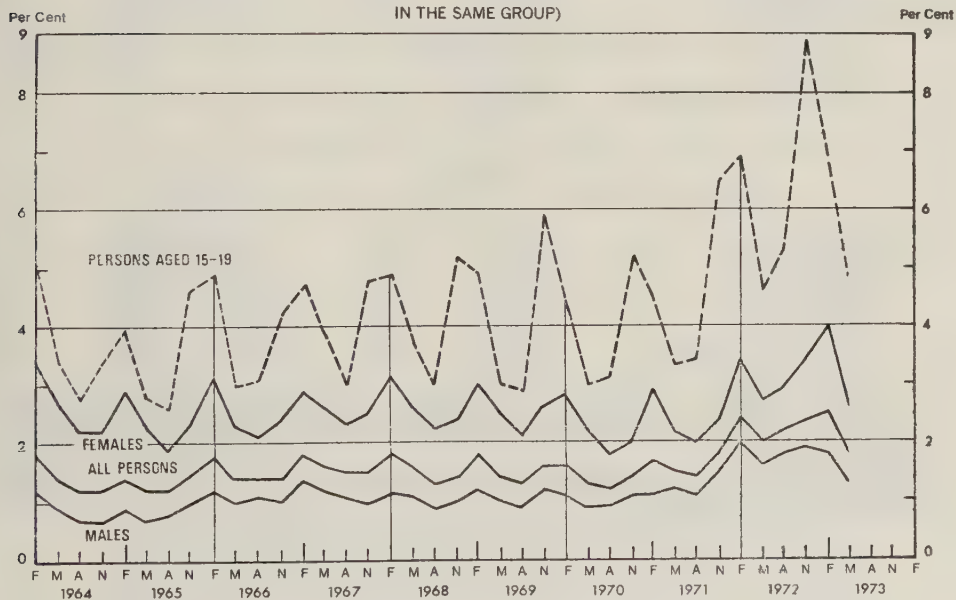
## LABOUR FORCE PARTICIPATION RATES

(THE LABOUR FORCE IN EACH GROUP AS A PERCENTAGE OF THE CIVILIAN POPULATION AGED  
15 YEARS AND OVER IN THE SAME GROUP)



## UNEMPLOYMENT RATES

(THE UNEMPLOYED IN EACH GROUP AS A PERCENTAGE OF THE CIVILIAN LABOUR FORCE  
IN THE SAME GROUP)



(a) Never married, widowed and divorced.



**CIVILIAN LABOUR FORCE(a): EMPLOYMENT STATUS, BIRTHPLACE AND YEAR OF  
ARRIVAL IN AUSTRALIA, MAY 1973**

Birthplace and year of arrival	Employed(b) ( <sup>0</sup> 000)	Unemployed(b)		Total labour force(b)	
		Number ( <sup>0</sup> 000)	Per cent of labour force	Number ( <sup>0</sup> 000)	Per cent of population(c)
MALES					
Born in Australia . . . . .	2,730.3	33.9	1.2	2,764.2	82.1
Born outside Australia . . . . .	1,032.8	16.9	1.6	1,049.6	85.5
Arrived before 1955 . . . . .	354.3	4.4	1.2	358.7	77.6
1955 to 1961 . . . . .	229.8	4.8	2.0	234.5	92.0
1962 to 1966 . . . . .	164.4	*	*	166.7	88.0
1967 to 1971 . . . . .	226.6	*	*	230.2	91.0
Jan. 1972 to survey date . . . . .	57.7	*	*	59.5	86.8
MARRIED WOMEN					
Born in Australia . . . . .	806.6	15.8	1.9	822.5	35.1
Born outside Australia . . . . .	347.8	10.0	2.8	357.8	44.4
Arrived before 1955 . . . . .	99.5	*	*	102.6	37.5
1955 to 1961 . . . . .	86.4	*	*	87.6	49.0
1962 to 1966 . . . . .	59.2	*	*	60.7	43.9
1967 to 1971 . . . . .	86.3	*	*	88.6	50.1
Jan. 1972 to survey date . . . . .	16.4	*	*	18.4	47.0
ALL FEMALES					
Born in Australia . . . . .	1,364.6	33.7	2.4	1,398.3	39.1
Born outside Australia . . . . .	473.2	15.7	3.2	488.9	45.0
Arrived before 1955 . . . . .	127.0	*	*	130.6	34.2
1955 to 1961 . . . . .	114.3	*	*	116.3	50.4
1962 to 1966 . . . . .	84.9	*	*	87.8	48.3
1967 to 1971 . . . . .	118.2	*	*	121.9	52.9
Jan. 1972 to survey date . . . . .	28.8	*	*	32.3	52.2
PERSONS					
Born in Australia . . . . .	4,094.9	67.6	1.6	4,162.5	60.0
Born outside Australia . . . . .	1,506.0	32.6	2.1	1,538.6	66.5
Arrived before 1955 . . . . .	481.3	8.0	1.6	489.3	58.0
1955 to 1961 . . . . .	344.1	6.8	1.9	350.9	72.2
1962 to 1966 . . . . .	249.4	5.2	2.0	254.5	68.6
1967 to 1971 . . . . .	344.8	7.2	2.1	352.0	72.8
Jan. 1972 to survey date . . . . .	86.5	5.4	5.8	91.8	70.4

(a) Aged 15 years and over. (b) For definitions see page 706. (c) See note (c) to table on page 708. Persons in institutions for whom, for the purpose of the survey, the institution was regarded as their usual place of residence, have been omitted from the civilian population since it is not practicable to ascertain the birthplace or the year of arrival in Australia for such persons.

\* Estimates less than, or based on a figure less than, 4,000, are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

**CIVILIAN LABOUR FORCE(a), BY AGE AND MARITAL STATUS  
AUSTRALIA, MAY 1973**

Age group (years)	Married			Not married(b)			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
NUMBER ('000)									
15-19 . . .	7.9	24.2	32.1	338.2	287.1	625.3	346.1	311.3	657.4
20-24 . . .	190.9	176.5	367.3	310.3	161.8	472.1	501.1	338.3	839.4
25-34 . . .	755.5	314.6	1,070.1	177.1	77.6	254.7	932.6	392.2	1,324.8
35-44 . . .	667.1	311.8	978.9	83.7	49.3	133.0	750.9	361.0	1,111.9
45-54 . . .	634.5	257.5	892.0	80.8	66.7	147.4	715.3	324.2	1,039.4
55-59 . . .	241.8	66.4	308.2	30.2	30.8	61.0	272.0	97.2	369.2
60-64 . . .	169.1	22.6	191.8	29.5	20.0	49.5	198.7	42.6	241.3
65 and over .	77.0	6.7	83.7	20.2	13.8	34.0	97.1	20.5	117.7
<b>Total .</b>	<b>2,743.8</b>	<b>1,180.3</b>	<b>3,924.1</b>	<b>1,070.0</b>	<b>707.0</b>	<b>1,777.0</b>	<b>3,813.8</b>	<b>1,887.3</b>	<b>5,701.1</b>

**PER CENT OF POPULATION(c)**

15-19 . . .	98.9	48.3	55.2	58.6	55.5	57.1	59.2	54.9	57.1
20-24 . . .	98.0	49.9	67.0	86.2	84.4	85.6	90.4	62.0	76.3
25-34 . . .	98.9	38.4	67.6	91.1	82.3	88.2	97.3	43.0	70.8
35-44 . . .	98.4	47.1	73.1	90.2	72.1	82.5	97.4	49.5	74.1
45-54 . . .	96.2	41.3	69.5	85.1	60.7	72.0	94.8	44.2	69.8
55-59 . . .	91.7	27.6	61.1	75.4	41.3	53.2	89.5	30.6	59.6
60-64 . . .	77.1	12.5	47.9	70.0	21.6	36.8	75.9	15.6	45.1
65 and over .	23.1	2.9	14.8	15.4	3.3	6.2	20.9	3.2	10.6
<b>Total .</b>	<b>87.9</b>	<b>37.3</b>	<b>62.5</b>	<b>69.9</b>	<b>45.1</b>	<b>57.4</b>	<b>82.0</b>	<b>39.9</b>	<b>60.8</b>

(a) Aged 15 years and over. For definitions see page 706. (b) Never married, widowed and divorced. (c) The labour force in each group as a percentage of the civilian population in the same group.

**CIVILIAN LABOUR FORCE(a), BY INDUSTRY, AUSTRALIA, MAY 1973**

('000)

Industry group(b)	Males	Females	Persons
Agriculture . . . . .	314.4	67.0	381.4
Manufacturing . . . . .	1,006.5	353.2	1,359.7
Construction . . . . .	479.3	23.4	502.6
Wholesale and retail trade . . . . .	703.8	472.5	1,176.4
Transport and storage . . . . .	264.6	39.4	304.0
Finance, insurance, real estate and business services . . . . .	213.1	177.3	390.3
Community services(c) . . . . .	254.4	420.0	674.4
Entertainment, hotels, personal services, etc. . . . .	143.1	216.5	359.5
Other industries . . . . .	431.0	112.7	543.7
Looking for first job . . . . .	*	5.4	9.0
<b>Total . . . . .</b>	<b>3,813.8</b>	<b>1,887.3</b>	<b>5,701.1</b>

(a) Aged 15 years and over. For definitions see page 706. (b) The industry estimates are based on the Australian Standard Industrial Classification (ASIC). See page 706. (c) Comprises health; education, libraries, etc.; welfare and religious institutions; and other community services.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

**CIVILIAN LABOUR FORCE(a), BY OCCUPATION, AUSTRALIA, MAY 1973**  
(<sup>'000</sup>)

<i>Occupation group</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
Professional and technical . . . . .	380.4	274.0	654.3
Administrative, executive and managerial . . . . .	314.7	37.9	352.6
Clerical . . . . .	307.9	614.4	922.3
Sales . . . . .	242.2	249.2	491.4
Farmers, fishermen, timber-getters, etc. . . . .	379.1	58.7	437.8
Transport and communication . . . . .	293.8	50.6	344.4
Tradesmen, production-process workers and labourers, n.e.c.(b) . . . . .	1,713.4	274.3	1,987.7
Service, sport and recreation . . . . .	178.8	322.8	501.6
Looking for first job . . . . .	*	5.4	9.0
<b>Total . . . . .</b>	<b>3,813.8</b>	<b>1,887.3</b>	<b>5,701.1</b>

(a) Aged 15 years and over. For definitions see page 706. (b) Includes miners, quarrymen and related workers.

\* Less than 4,000. See footnote \* to previous table.

**EMPLOYED PERSONS(a), BY HOURS WORKED(b), AUSTRALIA**  
(<sup>'000</sup>)

<i>May—</i>	<i>Hours worked during survey week</i>							<i>Average hours worked(d)</i>	
	<i>0(c)</i>	<i>1-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40</i>	<i>41-48</i>	<i>49 and over</i>	<i>Total</i>	<i>All persons</i>
<b>MALES</b>									
1969 . . . . .	194.1	167.5	227.3	282.8	1,474.0	504.1	694.6	3,544.4	40.8
1970 . . . . .	217.3	165.3	157.0	320.6	1,449.3	547.1	774.3	3,630.8	41.2
1971 . . . . .	225.9	175.3	149.2	322.9	1,461.2	561.6	797.8	3,693.9	41.1
1972 . . . . .	224.3	155.1	128.3	316.9	1,620.6	513.4	758.0	3,716.6	40.9
1973 . . . . .	239.3	176.2	180.0	333.5	1,482.1	539.0	812.9	3,763.1	40.9
<b>MARRIED WOMEN</b>									
1969 . . . . .	63.4	256.8	85.8	95.7	286.7	41.6	46.6	876.6	30.2
1970 . . . . .	68.4	285.0	68.7	121.6	311.0	51.6	56.2	962.5	30.6
1971 . . . . .	86.0	299.8	74.6	125.2	341.7	55.3	57.7	1,040.4	30.2
1972 . . . . .	86.0	293.1	76.6	127.6	373.6	53.8	53.9	1,064.5	30.5
1973 . . . . .	103.4	344.6	87.9	142.8	362.7	55.0	57.9	1,154.4	29.4
<b>OTHER FEMALES(c)</b>									
1969 . . . . .	41.1	68.2	53.7	141.0	325.4	48.5	23.5	701.4	34.9
1970 . . . . .	51.2	72.9	43.6	153.7	315.9	56.2	27.4	720.9	34.5
1971 . . . . .	59.8	73.9	40.4	149.1	310.0	56.6	28.1	718.0	33.9
1972 . . . . .	39.6	74.1	34.3	135.8	320.2	47.2	29.9	681.2	34.8
1973 . . . . .	46.5	82.6	41.4	143.9	295.5	45.1	28.5	683.4	33.9
<b>ALL FEMALES</b>									
1969 . . . . .	104.5	325.0	139.4	236.8	612.1	90.0	70.1	1,578.0	32.3
1970 . . . . .	119.7	357.8	112.3	273.3	626.9	107.8	83.6	1,683.4	32.2
1971 . . . . .	145.8	373.7	115.1	274.3	651.7	112.0	85.9	1,758.4	31.7
1972 . . . . .	125.6	367.3	111.0	263.3	693.8	101.0	83.8	1,745.8	32.2
1973 . . . . .	149.9	427.1	129.3	286.7	658.3	100.1	86.5	1,837.8	31.1

For footnotes see next page.



EMPLOYED PERSONS(a), BY HOURS WORKED(b), AUSTRALIA—continued  
(<sup>0</sup>000)

May—	Hours worked during survey week								Average hours worked(d)		
	0(c)	1-29	30-34	35-39	40	41-48	49 and over	Total	Full-time workers	All persons	
PERSONS											
1969 . . .	298.6	492.5	366.7	519.6	2,086.1	594.1	764.7	5,122.4	..	38.2	
1970 . . .	336.9	523.1	269.3	595.9	2,076.2	654.9	857.9	5,314.2	..	38.3	
1971 . . .	371.7	549.0	264.3	597.2	2,112.9	673.6	883.7	5,452.3	+0.8	38.1	
1972 . . .	349.9	522.3	239.3	580.3	2,314.4	614.5	841.8	5,462.4	40.7	38.1	
1973 . . .	389.2	603.3	309.3	620.2	2,140.4	639.1	899.4	5,600.9	40.6	37.7	

(a) Civilians 15 years of age and over. For definitions see page 706. (b) Actual hours worked during survey week, not hours paid for. The figures may be affected by public holidays, leave, absenteeism; temporary absence from work due to sickness, accidents, and industrial disputes; and work stoppages due to bad weather, plant breakdown, etc. (c) Excludes persons laid off for the whole of survey week without pay; these persons are classified as unemployed. (d) Persons with jobs who did not work during survey week have been included in the calculation of average hours worked. When recording hours worked, fractions of an hour are disregarded. This procedure results in slight lowering of the average hours figures. (e) Never married, widowed and divorced.

EMPLOYED PERSONS(a) WHO WORKED LESS THAN 35 HOURS(b), BY REASON, AUSTRALIA  
(<sup>0</sup>000)

May—	Usually work 35 hours or more				Usually work less than 35 hours		
	Reason for working less than 35 hours				Reason for working less than 35 hours		
	Leave or holiday	Own illness or injury	Other reasons	Total	Lack of work	Other reasons	Total
MALES							
1969 . . .	205.5	86.1	(c)159.6	451.2	7.4	130.3	137.7
1970 . . .	261.1	93.3	61.0	415.4	7.2	117.0	124.2
1971 . . .	281.2	90.0	53.0	424.2	10.5	115.6	126.1
1972 . . .	264.5	89.6	43.0	397.0	10.5	100.1	110.6
1973 . . .	336.4	95.9	34.1	466.4	10.3	118.9	129.2
FEMALES							
1969 . . .	78.0	37.3	(c)41.1	156.4	17.1	395.5	412.6
1970 . . .	115.3	36.6	7.3	159.2	13.7	416.8	430.5
1971 . . .	135.0	36.3	8.1	179.4	14.9	440.3	455.2
1972 . . .	115.6	32.6	8.6	156.9	17.0	430.0	447.0
1973 . . .	161.0	33.4	7.7	202.1	18.7	485.6	504.2
PERSONS							
1969 . . .	283.5	123.4	(c)200.7	607.6	24.5	525.7	550.2
1970 . . .	376.5	129.9	68.2	574.6	20.9	533.8	554.8
1971 . . .	416.2	126.3	61.1	603.6	25.4	555.9	581.3
1972 . . .	380.1	122.2	51.6	553.9	27.5	530.0	557.5
1973 . . .	497.4	129.3	41.8	668.4	28.9	604.4	633.4

(a) Civilians 15 years of age and over. For definitions see page 706. (b) See note (b) to previous table. (c) Affected by industrial disputes.

**UNEMPLOYMENT RATES(a), STATE CAPITAL CITIES AND OTHER AREAS**  
(Per cent)

May—	State capital cities(b)			Other areas		
	Males	Females	Persons	Males	Females	Persons
1969 . . . .	0.9	2.0	1.3	1.1	3.6	1.7
1970 . . . .	0.9	1.7	1.2	0.9	3.3	1.6
1971 . . . .	1.2	1.8	1.4	1.2	2.9	1.7
1972 . . . .	1.8	2.4	2.0	1.4	3.4	1.9
1973 . . . .	1.2	2.1	1.6	1.5	3.6	2.1

(a) The unemployed in each group as a percentage of the labour force in the same group. (b) The figures relate to persons residing within the boundaries of the relevant Statistical Divisions. Explanatory notes on the delimitation of urban boundaries are shown on pages 134–5. Maps showing the boundaries of the capital city Statistical Divisions were published in *Census of the Commonwealth of Australia, 30 June 1966—Field Count Statement No. 4*, and *Census of Population and Housing, 30 June 1971—Field Count Statement Nos 3 to 8*.

**UNEMPLOYED PERSONS(a), AUSTRALIA**

May—	Age (years)				Duration of unemployment(b)				Looking for—		Total ( <sup>c</sup> 000)
	15-19		20 and over		Under 2 weeks ( <sup>c</sup> 000)	2 and under 4 weeks ( <sup>c</sup> 000)	4 and under 13 weeks ( <sup>c</sup> 000)	13 weeks and over ( <sup>c</sup> 000)	Full- time work(c) ( <sup>c</sup> 000)	Part- time work(d) ( <sup>c</sup> 000)	
	Number unem- ployed ( <sup>c</sup> 000)	Per cent of labour force	Number unem- ployed ( <sup>c</sup> 000)	Per cent of labour force							
MALES											
1969 .	7.7	2.3	27.7	0.9	6.9	10.4	11.1	7.0	33.4	*	35.4
1970 .	8.2	2.4	25.7	0.8	8.6	13.6	8.3	*	31.5	*	33.9
1971 .	12.0	3.4	32.0	0.9	7.5	17.7	13.7	5.1	41.5	*	44.0
1972 .	14.6	4.4	46.4	1.3	10.8	17.0	21.0	12.1	58.6	*	61.0
1973 .	14.5	4.2	36.2	1.0	9.4	15.8	16.1	9.4	45.1	5.6	50.7
FEMALES											
1969 .	12.0	3.8	27.7	2.1	10.6	11.0	10.3	7.8	27.8	11.8	39.7
1970 .	11.4	3.6	26.3	1.9	10.2	9.0	13.3	5.2	23.9	13.8	37.7
1971 .	10.1	3.1	28.6	1.9	9.3	11.3	11.6	6.4	26.7	11.9	38.7
1972 .	14.7	4.8	34.4	2.3	10.0	12.4	18.3	8.4	37.1	12.1	49.2
1973 .	16.3	5.2	33.2	2.1	11.2	13.6	15.0	9.7	33.1	16.3	49.5
PERSONS											
1969 .	19.7	3.0	55.4	1.2	17.5	21.4	21.4	14.8	61.2	13.8	75.1
1970 .	19.5	3.0	52.0	1.1	18.8	22.6	21.6	8.6	55.3	16.2	71.5
1971 .	22.1	3.3	60.6	1.2	16.8	29.0	25.3	11.5	68.3	14.4	82.7
1972 .	29.4	4.6	80.8	1.6	20.9	29.5	39.4	20.5	95.7	14.5	110.2
1973 .	30.8	4.7	69.4	1.4	20.6	29.4	31.1	19.1	78.3	21.9	100.2

(a) Civilians 15 years of age and over. For definitions see page 706. (b) Period from the time the person began looking for work, or was laid off, to the end of survey week. (c) Includes persons laid off from full-time jobs. (d) Includes persons laid off from part-time jobs.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

## UNEMPLOYED PERSONS(a), BY AGE AND BIRTHPLACE, AUSTRALIA, MAY 1973

Age group (years)	Number unemployed ('000)			Per cent of labour force		
	Males ( <sup>000</sup> )	Females ( <sup>000</sup> )	Persons ( <sup>000</sup> )	Males (%)	Females (%)	Persons (%)
BORN IN AUSTRALIA						
Total . . . .	33.9	33.7	67.6	1.2	2.4	1.6
15-19 . . . .	11.7	12.3	24.1	3.9	4.7	4.3
20 and over . .	22.1	21.4	43.5	0.9	1.9	1.2
20-24 . . . .	6.2	8.5	14.7	1.6	3.2	2.2
25-34 . . . .	6.0	4.8	10.8	0.9	1.8	1.2
35 and over . .	9.9	8.1	18.1	0.7	1.4	0.9
BORN OUTSIDE AUSTRALIA						
Total . . . .	16.9	15.7	32.6	1.6	3.2	2.1
15-19 . . . .	*	4.0	6.7	*	8.3	7.1
20 and over . .	14.1	11.8	25.9	1.4	2.7	1.8
20-24 . . . .	*	*	5.2	*	*	3.0
25-34 . . . .	*	*	7.9	*	*	1.9
35 and over . .	7.3	5.5	12.8	1.2	2.2	1.5

(a) Civilians aged 15 years and over. For definition see page 706.

\* Less than or based on a figure less than 4,000. See footnote \* to previous table.



## PERSONS NOT IN THE LABOUR FORCE, BY MAJOR ACTIVITY, AUSTRALIA

('000)

May—	Kept house	Went to school, etc.	Retired or voluntarily idle	Permanently unable to work	Institutionalised (a)	Total
MALES						
1969 . . . .	11.2	223.8	381.4	46.2	52.5	715.1
1970 . . . .	10.7	234.2	391.8	45.6	49.3	731.5
1971 . . . .	13.9	246.5	415.1	36.5	55.3	767.3
1972 . . . .	11.6	275.2	424.5	36.2	52.6	800.1
1973 . . . .	9.7	269.0	462.1	41.6	56.7	839.0
MARRIED WOMEN						
1969 . . . .	1,930.8	*	15.6	5.4	10.9	1,964.0
1970 . . . .	1,919.2	*	22.0	*	10.4	1,958.4
1971 . . . .	1,923.8	*	21.6	*	11.6	1,962.3
1972 . . . .	1,969.2	4.4	21.3	*	13.1	2,011.8
1973 . . . .	1,934.1	5.4	25.4	5.9	10.0	1,980.8
OTHER FEMALES(b)						
1969 . . . .	432.2	184.8	94.7	21.3	41.5	774.5
1970 . . . .	416.9	186.9	101.1	16.5	56.9	778.3
1971 . . . .	436.7	193.8	103.4	13.4	50.4	797.8
1972 . . . .	442.4	221.9	103.9	13.2	58.0	839.4
1973 . . . .	445.3	223.4	114.8	18.2	57.5	859.1
ALL FEMALES						
1969 . . . .	2,363.0	186.1	110.3	26.7	52.4	2,738.5
1970 . . . .	2,336.1	190.3	123.1	19.9	67.3	2,736.7
1971 . . . .	2,360.5	197.1	125.0	15.5	62.0	2,760.1
1972 . . . .	2,411.6	226.3	125.1	17.0	71.2	2,851.2
1973 . . . .	2,379.4	228.8	140.2	24.1	67.4	2,839.9
PERSONS						
1969 . . . .	2,374.2	409.9	491.7	72.9	104.9	3,453.6
1970 . . . .	2,346.8	424.4	514.9	65.5	116.6	3,468.2
1971 . . . .	2,374.5	443.5	540.1	52.0	117.3	3,527.4
1972 . . . .	2,423.2	501.5	549.6	53.2	123.7	3,651.2
1973 . . . .	2,389.1	497.8	602.3	65.7	124.1	3,678.9

(a) Comprises inmates of gaols, patients in hospitals, sanatoria, etc., for whom, for the purpose of the survey, the institution was regarded as their dwelling. (b) Never married, widowed and divorced.

\* Less than 4,000. See footnote \* on page 714.

NOTE. For an explanation of the discontinuity in the series (indicated by horizontal line), see NOTE on page 708.

## Leavers from schools, universities or other educational institutions

Surveys based on the population survey sample (*see* page 705) have been carried out in February of each year since 1964 in order to obtain information about persons aged 15 to 24 who had attended full time at a school, university or other educational institution at some time during the previous year. Estimates for the years 1964 to 1972 have been published in previous issues of the Year Book. Estimates for February 1973 are shown below.

The main survey questions were designed to distinguish among persons who had attended full time at a school, university or other educational institution at some time in the previous year, those who were intending to return to full-time education and those who were not returning to full-time education, the latter being described in this section as 'leavers'.

The estimates relate to all persons in the age group 15 to 24 years, except members of the permanent armed forces, national servicemen enlisted in the Regular Army Supplement and certain diplomatic personnel customarily excluded from census and estimated populations. Certain categories of persons covered by the survey were not asked the survey questions. These comprised persons who were patients in hospitals and sanatoria, or inmates of gaols, reformatories, etc., and for whom, for the purposes of this survey, the institution was regarded as their dwelling, and persons reported as permanently unable to work. An estimate of the total number of such persons is shown in the first table in this section.

All persons covered by the survey were asked questions about their occupational status and those in the labour force were further questioned about their occupation and industry. Occupational status is shown for 'leavers', but not for persons returning to full-time education. Although many of these latter persons were in the labour force at the time of the surveys, their numbers would not give a useful indication of the extent of vacation employment because, in the years 1971 and 1972, the 'survey week' extended from the second week in February to the first week in March. Hence, between the first and last survey weeks, the level of vacation jobholding would have decreased substantially.

For further details reference should be made to the periodic mimeographed bulletins *Survey of Leavers from Schools, Universities or Other Educational Institutions* (6.9).

### CIVILIANS AGED 15 TO 24 YEARS(a), BY ATTENDANCE OR NON-ATTENDANCE FULL TIME AT A SCHOOL, UNIVERSITY, ETC, IN THE PREVIOUS YEAR AUSTRALIA, FEBRUARY 1973 (<sup>000</sup>)

	Males	Females	Persons
Attended school, university, etc., full time in previous year—			
Returning to full-time education . . . . .	281.0	245.2	526.2
Not returning to full-time education ('leavers') . . . . .	114.8	103.7	218.5
<b>Total . . . . .</b>	<b>395.9</b>	<b>348.9</b>	<b>744.7</b>
Did not attend school, university, etc., full time in previous year(b)	719.2	750.2	1,469.4
In hospitals, etc.(c) . . . . .	15.6	8.3	23.9
<b>Total persons aged 15 to 24 years . . . . .</b>	<b>1,130.7</b>	<b>1,107.3</b>	<b>2,238.0</b>

(a) At the time of the survey. (b) Excludes some patients in hospitals and sanatoria and some inmates of gaols, reformatories, etc., at the time of the survey, and persons permanently unable to work. (c) Estimated numbers of persons within the scope of the survey for whom the hospital, sanatorium, gaol, reformatory, etc., was regarded as their dwelling, and persons who were reported as permanently unable to work. Particulars of attendance at schools, etc., were not obtained in respect of such persons.

**'LEAVERS'(a), BY STATE AND BY TIME OF LEAVING, AUSTRALIA  
FEBRUARY, 1973  
(<sup>'000</sup>)**

	<i>Persons aged 15-19 years</i>			<i>Persons aged 15-24 years</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
New South Wales . . . . .	35.6	33.0	68.6	41.9	39.3	81.2
Victoria . . . . .	26.6	19.0	45.6	30.8	22.7	53.4
Queensland . . . . .	14.8	15.3	30.1	16.9	17.0	33.9
South Australia . . . . .	8.6	10.0	18.6	10.5	11.8	22.3
Western Australia . . . . .	7.9	7.2	15.1	9.4	8.0	17.4
Tasmania . . . . .	*	*	6.0	*	*	6.8
<b>Australia(b) . . . . .</b>	<b>97.6</b>	<b>88.5</b>	<b>186.2</b>	<b>114.8</b>	<b>103.7</b>	<b>218.5</b>
Time of leaving—						
January-June 1972 . . . . .	11.1	11.9	23.0	12.5	13.6	26.2
July-October 1972 . . . . .	11.3	12.6	23.9	13.8	13.2	27.0
November 1972 . . . . .	42.1	35.9	78.0	49.2	43.6	92.9
December 1972(c) . . . . .	33.1	28.2	61.3	39.3	33.2	72.5

(a) Persons aged 15 to 24 years inclusive at the time of the survey who had attended school, university, etc., full time during the previous year and who were not returning to full-time education. *See also* footnote (b) to previous table.  
 (b) Includes the Northern Territory and the Australian Capital Territory. (c) Includes a small number of persons who left school, university, etc., in January or February 1973.

\* Estimates less than 14,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.



PERSONS AGED 15 TO 24 YEARS IN FEBRUARY WHO ATTENDED FULL TIME AT A SCHOOL, UNIVERSITY, ETC., IN THE PREVIOUS YEAR, BY TYPE OF INSTITUTION ATTENDED AND WHETHER OR NOT RETURNING TO FULL-TIME EDUCATION  
FEBRUARY 1973, AUSTRALIA  
(<sup>'000</sup>)

	Institution attended full time in previous year					Total
	School	University	College of advanced education (b)	Technical college	Other	
Males—						
Returning to full-time education in 1973(a)—						
At same type of institution .	195.7	38.2	16.3	*	*	252.4
At different type of institution	26.1	*	*	*	*	28.6
Total . . . . .	221.9	40.1	16.5	*	*	281.0
Not returning to full-time education in 1973 ('leavers') . . . .	92.9	11.5	8.0	*	*	114.8
Total males . . . . .	314.7	51.6	24.5	*	*	395.9
Females—						
Returning to full-time education in 1973(a)—						
At same type of institution .	175.4	22.2	16.5	*	*	216.0
At different type of institution	28.4	*	*	*	*	29.2
Total . . . . .	203.8	23.0	16.5	*	*	245.2
Not returning to full-time education in 1973 ('leavers') . . . .	72.0	7.3	8.4	9.3	6.7	103.7
Total females . . . . .	275.8	30.3	24.9	10.4	7.5	348.9
Persons—						
Returning to full-time education in 1973(a)—						
At same type of institution .	371.2	60.4	32.8	*	*	468.4
At different type of institution	54.5	*	*	*	*	57.8
Total . . . . .	425.6	63.1	33.0	*	*	526.2
Not returning to full-time education in 1973 ('leavers') . . . .	164.8	18.8	16.4	10.7	7.8	218.5
Total persons . . . . .	590.5	81.9	49.4	14.0	9.0	744.7

(a) As the survey is conducted in February, the estimates shown will partly reflect expectations as to the institution to be attended. (b) Includes teachers colleges.

\* Less than 4,000. See footnote \* to table on page 718.

**'LEAVERS'(a) BY AGE, AUSTRALIA, FEBRUARY 1973**  
( '000)

	Age at time of leaving (years)						Total
	14	15	16	17	18	19 and over	
Attended school in 1972—							
Males . . . . .	*	31.7	28.5	17.6	9.7	*	92.9
Females . . . . .	*	28.9	21.3	12.8	4.5	*	72.0
<i>Persons</i> . . . . .	6.4	60.6	49.8	30.4	14.2	*	164.8
Attended any educational institution(b) in 1972—							
Males . . . . .	*	31.7	28.8	19.1	11.5	20.9	114.8
Females . . . . .	*	30.2	26.0	19.5	6.6	17.9	103.7
<i>Persons</i> . . . . .	6.4	61.9	54.8	38.6	18.2	38.7	218.5

(a) See note (a) to table on page 718. (b) Includes school.

\* Less than 4,000. See footnote \* to table on page 718.

### Survey of multiple jobholding, May 1971

In May 1971 a survey, based on the quarterly population survey (see page 705), was conducted throughout Australia in order to obtain information about the nature and extent of multiple jobholding. Results of the survey were shown in Year Book No. 58, pages 707-10. The results of earlier surveys of multiple jobholding, conducted in August 1966 and August 1967, were given in Year Book No. 54, pages 1162-6.

### EMPLOYED WAGE AND SALARY EARNERS

Estimates of wage and salary earners in this issue are based on data derived from the 1966 population census. Because of the adoption of a new definition of the labour force in the 1966 census these estimates are not comparable with those for periods before June 1966.

Detailed industry figures for each State and Australia, on the new basis, and a revised government employment series, have been published in two mimeographed bulletins entitled *Employed Wage and Salary Earners* (Reference No. 6.23), covering the period June 1966 to June 1971. These bulletins contain estimates for each month of the period covered. Estimates for current months are published in *Employment and Unemployment* (Reference No. 6.4).

To determine each person's labour force status at the 1966 census the following questions were asked in respect of all persons fifteen years of age and over.

'Did the person have a job or business of any kind last week (even though he may have been temporarily absent from it)?'

'Did the person do any work at all last week for payment or profit?'

Provided he had not been temporarily laid off by his employer without pay for the whole of the week, a person who answered 'yes' to either of these questions was classified as employed. Persons in this category who were stated to be 'working for wages or salary', except members of the defence forces, persons employed in agriculture or private domestic service, and crews of overseas ships have been included in the benchmarks for the current series. For further details see Year Book No. 58, pages 691-2.

The data needed to derive the estimates for periods subsequent to the benchmark date (June 1966) are obtained from three main sources, namely, (a) current payroll tax returns; (b) current returns from government bodies; and (c) some other current returns of employment (e.g. for hospitals); the balance, i.e. unrecorded private employment, is estimated. Month-to-month changes shown by current returns are linked to the benchmark data to derive the monthly estimates. At June 1966, recorded employment obtained from the foregoing sources accounted for about 85 per cent of the total number of employees in the industries covered, as determined by the census.

The figures in this section generally relate only to civilian wage and salary earners, not the total labour force. They therefore exclude employers, self-employed persons and unpaid helpers. Also excluded, because of the inadequacy of current data, are employees in agriculture and private domestic service, and some part-time employees. Defence forces are included in the table on page 722.

The June 1966 figures were derived from particulars recorded for individuals on population census schedules, while the estimated monthly changes are derived mainly from reports supplied by employers, relating to enterprises or establishments. Because the two sources differ in some cases in the reporting of industry, the industry dissection of the census totals has been adjusted to conform as closely as possible to an establishment reporting basis. For this reason, and because crews of overseas ships were excluded from the benchmark figures, the estimates for June 1966 in this chapter differ from those published in the series of census bulletins (Nos. 1.6, 2.6, etc.) which show particulars of the occupational status and industry of the population in each State and Territory, and in other publications which contain population census results. The industry classification used throughout the series is that of the population census of June 1966.

Current data supplied by reporting enterprises or establishments generally refer to persons on the payroll for the last pay-period in each month. Persons who are on paid leave or who work during part of the pay-period and are unemployed or on strike during the rest of the period are generally counted as employed. Those not shown on employers' payrolls because they are on leave without pay, on strike or stood down for the entire period are excluded.

Prior to 1 September 1971, payroll tax returns were lodged by all employers paying more than \$400 a week in wages (other than certain Commonwealth Government bodies, religious and benevolent institutions, public hospitals and other similar organisations specifically exempted under the *Pay-roll Tax Assessment Act 1941-1969*). Since that date, when the authority for collection of payroll tax passed from the Commonwealth to the States, State and local government bodies not engaged in business activity have generally been exempted.

Particulars of employment obtained from other collections, such as the annual manufacturing census and censuses and sample surveys of retail establishments, are used to check and where desirable to revise estimates in relevant sections. Some figures are subject to further revision as the results of later censuses and surveys become available.

Although the series measure reasonably well the short-term trends in employment in the defined field, they may be less reliable for longer-term measurement. There are conceptual differences between benchmark and payroll data, and changes in such factors as labour turnover, multiple jobholding and part-time working all affect the trend over longer periods.

As results from each successive population census become available it is customary to derive from them new benchmarks for the monthly employment series, and to revise the published estimates for all periods subsequent to the date of the previous census. Evidence from census post-enumeration surveys indicates that the filling in of census questionnaires by householders tends to identify a smaller number of persons as being in the labour force than do other methods of measurement (e.g. household surveys conducted by personal interview), and that components of the total labour force, such as employed wage and salary earners, tend to be affected in the same way. This tendency increased between the 1966 and 1971 censuses.

Comparison between census results and the monthly estimates of employed wage and salary earners is affected not only by the discrepancy referred to above but also by the accumulation of errors in the intercensal employment estimates and differences in the methods of industry classification. The Australian Standard Industrial Classification (ASIC) was adopted in coding the industry of the population at the 1971 census, whereas in the monthly estimates the 1966 census classification is still used. (See above.)

A revision of the employed wage and salary earner series, based on new benchmarks derived from census and other relevant data, is in course of preparation and is expected to result in reduced levels for current estimates.

NOTE. At the June 1971 population census, trainee teachers (enrolled at government teachers colleges and in some cases enrolled also at other institutions) were for the first time classified as not in the labour force. The employment estimates for that month include approximately 7,000 male and 17,000 female trainees. For subsequent periods trainee teachers have been excluded from the estimates.



## Total civilian employees and defence forces

WAGE AND SALARY EARNERS IN EMPLOYMENT, BY SEX: AUSTRALIA  
JUNE 1969 TO JUNE 1973

EXCLUDING EMPLOYEES IN AGRICULTURE AND PRIVATE DOMESTIC SERVICE

('000)

	June 1969	June 1970	June 1971	June 1972	June 1973
MALES					
Civilian employees—					
Private . . . .	2,014.9	2,084.3	2,142.9	2,135.7	2,170.0
Government(a)(b) . . . .	790.0	803.3	818.0	337.2	857.5
Total(b) . . . .	2,804.9	2,887.6	2,960.9	2,972.9	3,027.5
Defence forces(c) . . . .	80.8	81.5	80.5	78.3	71.0
Total(b) . . . .	2,885.7	2,969.1	3,041.4	3,051.2	3,098.5
FEMALES					
Civilian employees—					
Private . . . .	1,110.7	1,177.4	1,225.8	1,248.5	1,324.1
Government(a)(b) . . . .	256.1	275.4	291.1	285.6	302.7
Total(b) . . . .	1,366.8	1,452.8	1,516.9	1,534.1	1,626.8
Defence forces(c) . . . .	2.7	2.7	2.7	2.8	3.1
Total(b) . . . .	1,369.5	1,455.5	1,519.6	1,536.9	1,629.9
PERSONS					
Civilian employees—					
Private . . . .	3,125.6	3,261.7	3,368.7	3,384.2	3,494.1
Government(a)(b) . . . .	1,046.1	1,078.7	1,109.1	1,122.8	1,160.2
Total(b) . . . .	4,171.7	4,340.4	4,477.8	4,507.0	4,654.3
Defence forces(c) . . . .	83.5	84.2	83.2	81.1	74.1
Total(b) . . . .	4,255.2	4,424.6	4,561.0	4,588.1	4,728.4

(a) Includes employees, within Australia, of government authorities (Australian, State, local and semi-government) on services such as railways, road transport, banks, post office, air transport, education (including universities), broadcasting, television, police, public works, factories, departmental hospitals and institutions, etc., as well as administrative employees. See pages 724-5. (b) From July 1971 the estimates exclude trainee teachers, some of whom were classified as wage and salary earners for earlier periods. See NOTE on page 721. (c) Permanent defence forces in Australia and overseas.

## Civilian employees

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT  
BY INDUSTRY GROUP AND SEX: AUSTRALIA, JUNE 1969 TO JUNE 1973

EXCLUDING DEFENCE FORCES AND EMPLOYEES IN AGRICULTURE AND PRIVATE DOMESTIC SERVICE

('000)

Industry group	June 1969	June 1970	June 1971	June 1972	June 1973
MALES					
Mining and quarrying . . . .	59.5	65.2	69.4	69.8	70.0
Manufacturing . . . . .	1,002.5	1,020.6	1,034.5	1,021.0	1,022.4
Electricity, gas, water and sanitary services . . . . .	104.3	105.2	106.7	108.2	109.1
Building and construction . . . .	344.3	351.3	361.4	365.8	366.7
Transport and storage . . . . .	211.9	218.3	222.8	220.5	222.3
Communication . . . . .	87.7	90.4	92.2	93.8	96.9
Finance and property . . . . .	112.5	118.6	123.2	124.7	129.2
Retail trade . . . . .	204.0	209.9	214.7	221.8	234.6
Wholesale and other commerce . . .	203.4	208.0	209.7	209.5	212.0
Public authority activities (n.e.i.) .	126.8	132.1	137.8	142.7	148.3
Health, hospitals, etc. . . . .	43.0	44.6	47.1	49.9	52.0
Education(a) . . . . .	92.8	96.9	103.3	101.2	109.1
Amusement, hotels, cafes, personal service, etc. . . . .	101.7	108.4	114.7	119.4	126.4
Other(b) . . . . .	110.6	118.2	123.3	124.6	128.5
Total(a) . . . . .	2,804.9	2,887.6	2,960.9	2,972.9	3,027.5
FEMALES					
Mining and quarrying . . . . .	3.3	4.2	4.8	4.7	4.7
Manufacturing . . . . .	342.1	355.9	357.4	348.0	362.0
Electricity, gas, water and sanitary services . . . . .	7.9	8.2	8.5	8.5	8.7
Building and construction . . . .	14.6	16.0	17.6	18.2	19.6
Transport and storage . . . . .	25.2	27.1	28.4	28.3	29.4
Communication . . . . .	25.4	26.5	27.4	28.0	28.7
Finance and property . . . . .	83.1	90.2	94.0	94.5	98.7
Retail trade . . . . .	219.7	229.1	235.5	246.6	269.3
Wholesale and other commerce . . .	79.8	83.9	86.7	86.2	88.8
Public authority activities (n.e.i.) .	55.4	60.2	63.2	66.8	71.2
Health, hospitals, etc. . . . .	165.6	177.5	191.0	207.1	219.5
Education(a) . . . . .	128.7	137.8	148.3	138.8	148.6
Amusement, hotels, cafes, personal service, etc. . . . .	140.3	153.3	165.0	167.8	179.0
Other(b) . . . . .	75.9	83.0	89.0	90.8	98.6
Total(a) . . . . .	1,366.8	1,452.8	1,516.9	1,534.1	1,626.8
PERSONS					
Mining and quarrying . . . . .	62.8	69.4	74.2	74.5	74.7
Manufacturing . . . . .	1,344.6	1,376.5	1,392.0	1,369.0	1,384.5
Electricity, gas, water and sanitary services . . . . .	112.1	113.4	115.1	116.6	117.8
Building and construction . . . .	358.9	367.3	379.0	384.0	386.3
Transport and storage . . . . .	237.1	245.4	251.2	248.8	251.7
Communication . . . . .	113.0	117.0	119.6	121.8	125.6
Finance and property . . . . .	195.6	208.8	217.3	219.2	227.9
Retail trade . . . . .	423.7	438.9	450.2	468.4	503.9
Wholesale and other commerce . . .	283.2	291.9	296.5	295.6	300.8
Public authority activities (n.e.i.) .	182.1	192.3	201.0	209.4	219.5
Health, hospitals, etc. . . . .	208.6	222.1	238.1	257.0	271.5
Education(a) . . . . .	221.5	234.7	251.7	240.0	257.7
Amusement, hotels, cafes, personal service, etc. . . . .	241.9	261.7	279.7	287.1	305.4
Other(b) . . . . .	186.4	201.2	212.3	215.5	227.1
Total(a) . . . . .	4,171.7	4,340.4	4,477.8	4,507.0	4,654.3

(a) From July 1971 the estimates exclude trainee teachers, some of whom were classified as wage and salary earners for earlier periods. See NOTE on page 721. (b) Comprises forestry, fishing and trapping; law, order and public safety; religion and social welfare; and other community and business services.

**WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT, BY SEX  
STATES AND TERRITORIES, JUNE 1969 TO JUNE 1973**

EXCLUDING DEFENCE FORCES AND EMPLOYEES IN AGRICULTURE AND PRIVATE DOMESTIC SERVICE  
(<sup>'000</sup>)

June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T. (a)	Aust.
<b>MALES</b>									
1969 . .	1,052.2	782.2	366.6	261.6	206.4	86.5	17.2	32.2	2,804.9
1970 . .	1,083.1	801.0	377.5	266.6	216.5	88.5	19.3	35.1	2,887.6
1971 . .	1,108.3	812.7	390.8	271.7	229.1	89.1	21.2	38.1	2,960.9
1972(b) .	1,103.7	821.7	401.1	271.1	224.2	89.4	21.0	40.7	2,972.9
1973 . .	1,118.5	833.4	413.7	278.8	228.0	90.2	20.9	44.0	3,027.5
<b>FEMALES</b>									
1969 . .	518.4	405.8	160.7	121.4	97.3	38.1	7.2	18.1	1,366.8
1970 . .	550.0	426.1	171.4	129.9	107.5	39.3	8.1	20.6	1,452.8
1971 . .	572.0	440.0	182.3	136.3	114.8	40.5	8.7	22.4	1,516.9
1972(b) .	572.6	445.0	187.6	137.6	118.0	40.2	9.7	23.4	1,534.1
1973 . .	605.5	467.7	201.7	147.7	125.3	41.9	10.4	26.6	1,626.8
<b>PERSONS</b>									
1969 . .	1,570.6	1,188.0	527.3	383.0	303.7	124.6	24.4	50.3	4,171.7
1970 . .	1,633.1	1,227.1	548.9	396.5	324.0	127.8	27.4	55.7	4,340.4
1971 . .	1,680.3	1,252.7	573.1	408.0	343.9	129.6	29.9	60.5	4,477.8
1972(b) .	1,676.3	1,266.7	588.7	408.7	342.2	129.6	30.7	64.1	4,507.0
1973 . .	1,724.0	1,301.1	615.4	426.5	353.3	132.1	31.3	70.6	4,654.3

(a) Includes persons employed in the Australian Capital Territory who reside in adjoining areas. (b) From July 1971 the estimates exclude trainee teachers, some of whom were classified as wage and salary earners for earlier periods. See NOTE on page 721.

**Government employees**

The numbers of civilian employees of Commonwealth, State and local government authorities in each State and Territory at June 1973 are shown in the following table. These include employees within Australia of government authorities on services such as railways, road transport, banks, post office, air transport, education (including universities), broadcasting, television, police, public works, factories, departmental hospitals and institutions, etc., as well as administrative employees.

**CIVILIAN EMPLOYEES OF GOVERNMENT DEPARTMENTS AND AUTHORITIES, BY SEX  
STATES AND TERRITORIES, JUNE 1973**

(<sup>'000</sup>)

State or Territory	Australian Government(a)(b)			State Government(a)(b)			Local Government			Total(a)(b)		
	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons
New South Wales . .	84.6	30.4	115.0	166.3	68.4	234.6	50.8	6.6	57.4	301.6	105.4	407.0
Victoria . .	71.2	23.3	94.5	125.8	44.9	170.7	18.8	4.0	22.8	215.9	72.1	288.1
Queensland . .	26.9	9.4	36.2	75.3	23.9	99.2	20.0	1.9	21.9	122.2	35.2	157.4
South Australia . .	23.5	6.5	30.0	53.2	26.7	79.9	6.6	0.9	7.5	83.3	34.1	117.4
Western Australia . .	15.5	5.7	21.2	51.2	20.2	71.4	6.7	1.2	7.8	73.4	27.1	100.5
Tasmania . .	5.4	1.7	7.2	18.6	6.8	25.4	2.7	0.4	3.1	26.7	8.9	35.7
Northern Territory . .	8.2	4.1	12.3	..	..	..	0.2	..	0.2	8.4	4.1	12.5
Australian Capital Territory . .	25.8	15.8	41.7	..	..	..	..	..	..	25.8	15.8	41.7
<b>Australia . .</b>	<b>261.3</b>	<b>96.9</b>	<b>358.1</b>	<b>490.4</b>	<b>190.9</b>	<b>681.3</b>	<b>105.8</b>	<b>15.0</b>	<b>120.8</b>	<b>857.5</b>	<b>302.7</b>	<b>1,160.2</b>

(a) Includes semi-government authorities. See explanation above. (b) Excludes trainee teachers, some of whom were classified as wage and salary earners for earlier periods. See NOTE on page 721.



CIVILIAN EMPLOYEES OF GOVERNMENT DEPARTMENTS AND AUTHORITIES, BY SEX  
AUSTRALIA, JUNE 1969 TO JUNE 1973

('000)

June—	Commonwealth Government(a)(b)			State Government(a)(b)			Local Government			Total(a)(b)		
	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons
1969 . . . .	236.2	79.4	315.7	463.2	164.2	627.5	90.6	12.4	103.0	790.0	256.1	1,046.1
1970 . . . .	243.9	85.5	329.4	467.3	177.1	644.4	92.1	12.8	104.8	803.3	275.4	1,078.7
1971 . . . .	249.5	88.9	338.3	476.7	188.7	665.4	91.9	13.4	105.4	818.0	291.1	1,109.1
1972 . . . .	253.0	91.8	344.8	481.8	180.0	661.7	102.4	13.9	116.3	837.2	285.6	1,122.8
1973 . . . .	261.3	96.9	358.1	490.4	190.9	681.3	105.8	15.0	120.8	857.5	302.7	1,160.2

(a) Includes semi-government authorities. See explanation on page 724. (b) From July 1971 the estimates exclude trainee teachers, some of whom were classified as wage and salary earners for earlier periods. See NOTE on page 721.

## COMMONWEALTH EMPLOYMENT SERVICE

Statutory warrant for the Commonwealth Employment Service (C.E.S.) is to be found in the *Re-establishment and Employment Act* 1945–1966 (sections 47 and 48). In brief, the main functions of the C.E.S. are to assist people seeking employment to obtain positions best suited to their training, experience and qualifications; and to assist employers seeking labour to obtain employees best suited to their needs. The organisation and functions of the C.E.S. conform to the provisions of the Employment Service Convention, 1948, of the International Labour Organisation, which was ratified by Australia in December 1949. In addition, C.E.S. practices accord substantially with the provisions of the I.L.O. Employment Service Recommendation, 1948.

The C.E.S. functions on a decentralised basis within the Employment and Training Division of the Department of Labour. The Central Office is in Melbourne and there is a Regional Office in the capital city of each State. There are 167 Employment Offices in suburban and the larger provincial centres and 153 agents in the smaller country centres. The Employment Offices are distributed as follows: New South Wales, 59; Victoria, 41; Queensland, 27; South Australia, 19; Western Australia, 16; Tasmania, 5. The New South Wales figure includes one office in Canberra while the South Australian figure includes three in the Northern Territory.

Specialised facilities are provided for young people, persons with physical and mental handicaps, ex-members of the defence forces, migrants, rural workers, and persons with professional and technical qualifications. The C.E.S. provides vocational guidance free of charge in all States and has a staff of qualified psychologists for this function. Guidance is available to any person, but is provided particularly for young people, ex-servicemen and the handicapped. In New South Wales the C.E.S. provides vocational guidance to adults, including ex-servicemen and the handicapped, while the State Department of Labour and Industry provides a vocational guidance service within the school system and for young persons leaving school.

All applicants for unemployment benefits under the *Social Services Act* 1947–1973 must register at an Office or agency of the C.E.S., which is responsible for certifying whether or not suitable employment can be offered to them. The C.E.S. is responsible for placing in employment migrant workers sponsored by the Commonwealth under the Commonwealth Nomination and similar schemes. This includes arranging for them to move to their initial employment and advising the Department of Immigration of the hostels to which migrants should be allocated on arrival. Assistance in obtaining employment is provided to other migrants as required. Since 1951 it has been responsible for recruiting Australian experts for overseas service under the Colombo Plan and the United Nations Expanded Programme of Technical Assistance (now replaced by the U.N. Development Programme). The principal spheres in which experts have been supplied are agriculture, education, engineering, geology, health, and economic and scientific research and development.

In association with placement activities, regular surveys of the labour market are carried out and detailed information is supplied to interested Commonwealth and State Government departments and instrumentalities and to the public. Employers, employees and other interested persons are advised on labour availability and employment opportunities in various occupations and areas and on other matters concerning employment.

The Service completed its twenty seventh year of operation in May 1973. During 1972 there were 1,470,934 applicants who registered for employment, of whom 1,004,006 were referred to employers and 557,498 placed in employment. New vacancies notified numbered 797,990.

**Persons registered for employment**

The following table shows the number of persons who claimed, when registering for employment with the Commonwealth Employment Service, that they were not employed and who were recorded as unplaced. The figures include those persons who were referred to employers and those who may have obtained employment without notifying the C.E.S. They include persons in receipt of unemployment benefit (see the chapter Welfare Services).

**PERSONS REGISTERED FOR EMPLOYMENT WITH THE COMMONWEALTH  
EMPLOYMENT SERVICE: STATES, JUNE 1969 TO JUNE 1973**

(Source: Department of Labour)

<i>June(a)</i>	<i>N.S.W.(b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(c)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1969 . . . .	18,277	13,254	10,908	6,300	4,007	2,120	54,866
1970 . . . .	16,527	13,008	8,585	6,360	5,147	1,888	51,515
1971 . . . .	21,609	17,878	9,412	7,975	6,683	2,682	66,239
1972 . . . .	34,176	25,430	11,693	12,328	12,076	3,498	99,201
1973 . . . .	27,003	22,219	10,636	9,339	8,461	3,718	81,376

(a) Generally at Friday nearest end of month.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

**Job vacancies**

The following table shows the number of vacancies registered with the Commonwealth Employment Service. The figures refer to vacancies which employers claimed were available immediately or would be available by the end of the following calendar month.

**VACANCIES REGISTERED WITH THE COMMONWEALTH EMPLOYMENT SERVICE  
STATES, JUNE 1969 TO JUNE 1973**

(Source: Department of Labour)

<i>June(a)</i>	<i>N.S.W.(b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(c)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1969 . . . .	14,053	11,777	2,057	2,561	3,786	762	34,996
1970 . . . .	17,674	12,326	3,240	2,495	3,206	924	39,865
1971 . . . .	13,623	9,228	3,305	2,596	2,340	679	31,771
1972 . . . .	8,695	8,411	3,024	2,093	1,564	699	24,486
1973 . . . .	21,532	16,522	6,986	5,152	3,302	1,014	54,508

(a) Generally at Friday nearest end of month.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

## CHAPTER 21

# MANUFACTURING INDUSTRY

### Introduction

An historical summary of the development of the manufacturing industry in Australia since 1901 is contained in earlier issues of the Year Book (*see* No. 51, pages 143-4).

#### Decentralisation and manufacturing industries

The decentralisation of secondary industries, and the steps taken by Commonwealth and State Governments towards its development, are referred to in previous issues of the Year Book (*see* No. 51, page 144).

#### Bounties on manufacture

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable, and require the bounty to be withheld or reduced if a manufacturer's net profit in production of the commodity exceeds a certain rate, or if rates of wages and conditions of employment in production of the commodity do not conform to prescribed standards. (*See* Chapter 18, Public Finance for products on which bounties are paid).

#### Standardisation

*The Commonwealth Scientific and Industrial Research Organization* has functions concerned with the improvement of efficiency in industrial operations. For further particulars *see* the chapter Education, Cultural Activities, and Research of this Year Book.

*The Standards Association of Australia* is the organisation responsible for industrial standardisation on a national basis. It issues Australian standards for materials and products and standard codes of practice.

Formed as the Australian Commonwealth Engineering Standards Association in 1922, it was reconstituted as the Standards Association of Australia in 1929, and was incorporated by Royal Charter in 1950. It is an independent body having the full recognition and support of the Commonwealth and State Governments and of industry. Approximately half its funds are provided by Commonwealth Government grant, the remainder coming primarily from membership subscriptions and from sale of publications. Organisations, companies, and individuals are eligible for subscribing membership.

The Association is controlled by a Council comprising representatives from Commonwealth and State Governments and their departments, from associations of manufacturing and commercial interests, and from professional institutions. Standards are prepared by committees composed of expert representatives from the interests associated with the subjects under consideration. This assistance is on a voluntary basis.

Preparation of standards is undertaken in response to requests from industrial associations or firms or from government departments. Standards may relate to one or more of several aspects of industrial practice such as terminology, test methods, dimensions, specifications of performance and quality of products, and safety or design codes. In general, standards derive authority from voluntary adoption based on their intrinsic merit, but in special cases where safety of life or property is involved, they may have compulsory application through statutory reference.

The Association is the owner of a registered certification trade mark covering conformity of products to standards. Manufacturers of products covered by Australian standards may obtain a licence to use the Australian Standard Mark, under conditions established by the Association.



The Association has international affiliations and is a member, representing Australia, of the International Organization for Standardization (ISO) and of the International Electrotechnical Commission (IEC). Close links are maintained with overseas standards organisations, and the Association acts as Australian agent for the procurement of ISO and IEC publications and the standards of other countries.

The Association has two specialised libraries, one in Sydney and one in Melbourne, containing the national standards of all countries with standards organisations. These libraries provide necessary material for committee work and a free information service to those concerned with standards.

The headquarters office of the Association is in Sydney, and there is a major branch office in Melbourne. Branch offices are located also in other capital cities and at Newcastle, New South Wales.

*The National Association of Testing Authorities* organises testing facilities throughout Australia to serve private and governmental needs.

Membership is open to authorities whose testing laboratories conform to the standards of staffing and operation defined by the Association. Testing authorities may register their laboratories voluntarily. The Association assesses the competence of the laboratories and ensures that their standards of competence are maintained. Certificates of test issued by registered laboratories may be endorsed in the name of the Association. NATA endorsed test certificates are generally accepted by governmental, industrial and commercial interests.

Laboratories are registered for performance of specific tests in the fields of metrology, mechanical testing, electrical testing, optics and photometry, non-destructive testing, heat and temperature measurement, chemical testing, biological testing, and acoustic and vibration measurement. In June 1973, 925 laboratories held NATA registration. A further 41 laboratories had been nominated for registration.

*The Industrial Design Council of Australia* was established in June 1958 for the purpose of encouraging better design in Australian-made goods and fostering an appreciation of good design throughout the community. The Council is fully representative of industry, commerce and government, together with designers and educationists. Its activities are financed by donations from industry and commerce, and by Commonwealth and State grants. IDCA has established Australian design centres in Adelaide, Melbourne and Sydney. These centres display Australian products of approved design and present changing exhibitions relating to design in manufactured articles. IDCA is also responsible for the Australian design index which provides a detailed, illustrated record of well-designed Australian products.

The design delegate scheme enables regular contact to be maintained with senior executives of manufacturing companies, departmental officers and designers wishing to participate actively in IDCA's programme of lectures, information, and guidance on all aspects of industrial design. Services to design delegates are administered by IDCA through its design centres.

A record of designers has been set up to register information about industrial designers and their work. The Council, which has its headquarters in Melbourne, is also concerned with raising the standard of training in industrial design in co-operation with education authorities. For further particulars see Year Book No. 51, page 145.

#### **Overseas participation in Australian manufacturing industry**

For further particulars, see Year Book No. 51, pages 143-4.

### **Manufacturing industry statistics**

#### **Manufacturing industry statistics from 1901 to 1967-68**

A series of substantially uniform statistics exist from 1901 up until 1967-68 when the framework within which manufacturing statistics were collected was changed. The following table contains a summary of statistics on manufacturing activities in Australia over that period. More detailed manufacturing statistics in respect of this period have been included in Year Book, No. 57, pages 721-9 and earlier issues.

## MANUFACTURING INDUSTRY: AUSTRALIA(a), 1901 TO 1967-68

Year	Facto- ries	Employ- ment(b)	Salaries and wages paid(c)	Value of—		Production (d)	Land and Buildings (e)	Plant and Machinery (e)
				Materials and fuel used	Output			
	No.	'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1901 .	11,143	198	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1911 .	14,455	312	55,056	163,526	266,044	102,518	65,402	63,032
1920-21 .	17,113	367	125,864	427,118	647,986	220,868	121,662	137,310
1930-31 .	21,751	339	124,910	344,978	581,598	236,620	224,422	248,996
1940-41 .	27,300	650	275,838	773,762	1,289,590	515,828	288,188	322,712
1950-51 .	43,147	969	983,436	2,613,926	4,301,670	1,687,744	605,570	673,230
1960-61 .	57,782	1,145	2,289,230	6,115,930	10,465,765	4,349,835	2,389,140	2,785,565
1963-64 .	59,375	1,210	2,651,620	7,372,682	12,642,686	5,270,003	3,204,685	3,480,673
1964-65 .	61,042	1,269	2,993,709	8,140,600	14,037,355	5,896,754	3,505,859	3,766,253
1965-66 .	61,686	1,294	3,162,769	8,437,958	14,689,819	6,251,861	3,776,590	4,154,652
1966-67 .	62,500	1,309	3,407,683	9,015,844	15,892,845	6,877,001	4,061,193	4,706,843
1967-68 .	62,954	1,331	3,665,902	9,663,217	17,094,070	7,430,853	4,303,156	4,962,203

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory. (b) 1901 and 1911—average employment during period of operation. Later years relate to average employment over whole year. Working proprietors are included in all years. (c) Excludes amounts drawn by working proprietors. (d) Value added in process of manufacture (i.e. value of output less value of materials and fuel, etc. used). (e) Depreciated or book values at 30 June. Includes estimated values of rented premises and machinery.

## Manufacturing industry statistics from 1968-69

As from the year ended June 1969, the Censuses of Manufacturing, Electricity and Gas have been conducted within the framework of the integrated economic censuses which include the Censuses of Mining, Retail Trade and Selected Services, and Wholesale Trade. As a result manufacturing industry statistics for 1968-69 and subsequent years are not directly comparable with previous years. The electricity and gas industries, which were previously included in the Annual Factory Census, were the subject of separate censuses, details of which are given on page 736. The integration of these economic censuses was designed to increase substantially the usefulness and comparability of economic statistics collected and published by the Bureau and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates.

The economic censuses of Manufacturing, Mining and Retail Trade previously conducted in Australia were originally designed and subsequently developed primarily to provide statistics for particular industries on a basis which would best suit the requirements of users interested in statistics of those industries. More recently there has been a growth of interest in statistics describing activity in the economy as a whole—reflected, for example, in the development of employment and earnings statistics, surveys of capital expenditure and stocks and the whole field of national accounts statistics. For such purposes statistics derived from economic censuses in the past have had serious limitations despite the fact that they covered a broad area of the whole economy. Because of the special-purpose nature of each of the censuses, there were no common definitions of data, there was no common system of reporting units, and, as a standard industrial classification was not used for these censuses, industry boundaries were not defined in ways which would avoid overlapping or gaps occurring between the industrial sectors covered. For these reasons, direct aggregation and comparison of statistics from different censuses were not possible.

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in scope, and in such a way that aggregates for certain important economic data such as value added, employment, wages and salaries, fixed capital expenditure and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses.



For the integration of the various censuses it was necessary to undertake three major developments:

- (a) The census units for which the statistics were to be collected (factories, mines, shops, etc.) had to be defined and identified in consistent ways and recorded in a central register, together with identifying data about the businesses owning and operating them.
- (b) A standard industrial classification had to be adopted so that the census units could be classified in consistent ways and to enable the boundaries of the various economic censuses to be determined without gaps or overlapping between them.
- (c) In order to bring the items of data to a consistent basis of definition in all censuses, it was necessary to revise all the forms used in previous censuses.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment), in general, now covers all the operations carried on under the one ownership at a single physical location. The manufacturing establishment is thus one predominantly engaged in manufacturing but the data supplied for it now cover (with a few exceptions) all activities at the location. Previously, the manufacturing establishment covered only a specified manufacturing activity primary to one class of industry. It now covers, in addition, subject to certain exceptions mentioned below:

- (a) Any other manufacturing activity (i.e. production of goods primary to another class of industry).
- (b) Any selling and distribution activities connected with the products manufactured.
- (c) Any non-manufacturing activity (e.g. merchandising of goods not manufactured by the establishment; extraction of raw materials for use by the establishment).

The exceptions in general relate to locations where the subsidiary activities (in terms of gross value) exceed \$1 million, which are treated for statistical purposes as two or more establishments corresponding to the various kinds of activity carried on.

The establishment statistics also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business (enterprise) which owns and operates the establishment. These units were formerly excluded from the manufacturing census. They are units such as head offices, storage premises and manufacturers' sales branches or sales offices (except those of the kind which distribute to customers from stocks held by such branches or offices, which are treated as establishments in the Wholesale Census).

The Australian Standard Industrial Classification (ASIC), described in the Bureau publication *Australian Standard Industrial Classification (Preliminary Edition)*, 1969, Vol. 1, defines the industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without gaps or overlapping between them. It also sets out standard rules for identifying the statistical units (e.g. establishments) and for coding them to the industries of the classification. This classification is broadly convertible to the International Standard Industrial Classification adopted by the United Nations Statistical Commission. The adoption of the ASIC has resulted in changes in scope between the integrated economic censuses introduced in 1968-69 and the individual economic censuses conducted in previous years. The main changes in scope in the manufacturing census apart, from providing for a separate census for electricity and gas, are as follows.

- (a) Establishments mainly engaged in the following activities, previously included in manufacturing censuses, are excluded as from 1968-69: motor vehicle repairs but not engine reconditioning; repair and servicing of agricultural machinery; dry-cleaning, laundering and clothes dyeing services; watch, clock and jewellery repairing; boot and shoe repairing; tyre retreading and repairing; custom dressmaking and tailoring (including clothing repair and alterations); installing and repairing of blinds and awnings, making up and installing of curtains; and repair of domestic appliances. Establishments mainly engaged in these activities are now included in the periodic Retail Trade or Wholesale Trade Censuses.
- (b) Establishments mainly engaged in non-manufacturing activities but which also carry out, as a subsidiary activity, some manufacturing activities, and which in respect of those manufacturing activities, were previously included in the manufacturing census are excluded as from 1968-69 unless such establishments have manufacturing activities of a gross value of \$1 million or more.
- (c) Establishments mainly engaged in the following activities, previously excluded in most States from manufacturing censuses, are included as from 1968-69: slaughtering, milk treatment, and publishing.

An indication of the effect of the changes referred to above can be gained from the following comparison. In the 1967-68 census there were approximately 62,600 manufacturing establishments



(excluding electricity and gas establishments), with employment of 1,276,000. Of these, approximately 35,400, with employment of 1,097,000 (but *see* footnote (b) to the following table) would have been included in the 1967-68 census if ASIC had been used. Figures for the individual States and Territories are given below.

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approximate number of manufacturing establishments—									
1967-68 census	24,900	18,000	6,100	6,200	5,300	1,800	180	240	62,600
1967-68 census if ASIC had been used(a)	13,800	11,400	3,500	3,000	2,500	960	70	100	35,400
Approximate number of employees (thousands)—									
1967-68 census	512	433	114	116	63	34		5	1,276
1967-68 census if ASIC had been used(b)	445	376	95	100	51	27		3	1,097

(a) Excludes the establishments referred to in (c), in the paragraph above. (b) These figures relate to employment as defined for the 1967-68 and previous year censuses. They thus exclude employment at the establishments referred to in (c) in the paragraph above, sales and distribution employees, employees connected with non-manufacturing activities and employees at separately located administrative offices and ancillary units serving manufacturing establishments. The figures, therefore, are not directly comparable with those for 1968-69 and 1969-70, which include the aforementioned employees.

The third step in integrating the censuses, whereby the items of data on the census forms were standardised for all census sectors, has meant changes in the content of the statistics. For example, the value of 'turnover' is now collected instead of the 'value of output' at the factory, and purchases and selected expenses are collected as well as the value of specified materials, fuels, etc., used. However the underlying concept of 'value added,' is similar to the former concept 'value of production', even though its method of derivation is different. Value added, the basic measure of the establishment's contribution to total production, is now calculated as turnover less purchases and transfers in (from other establishments of the enterprise), plus increase (or less decrease) in stocks. In the past the corresponding item, value of production, was obtained by deducting the value of materials, fuels, etc., used from the value of output at the factory. A detailed comparison of the method of derivation is shown in the following table.

<i>Value of production</i> 1967-68	<i>Value added</i> as from 1968-69
Selling value at works, exclusive of all delivery costs or charges, of goods manufactured, treated or worked up during the year, including by-products, <i>plus</i> Value of other work done, . . . such as repairing and making up for customers, etc.	Sales, and transfers out (to other establishments of the enterprise), of goods manufactured by the establishment, <i>plus</i> Sales and transfers out of goods not manufactured by the establishment, <i>plus</i> Bounties and subsidies on production, <i>plus</i> All other operating income, <i>plus</i> Capital work done for own use, or for rental or lease
<i>Equals:</i> Value of output	<i>Equals:</i> Value of turnover <i>Plus:</i> Closing stocks <i>Less:</i> Opening stocks
<i>Less—</i> Value of materials used Power, fuel and light used Water used Lubricating oils used Repairs, etc. Containers used	<i>Less—</i> Purchases and transfers in of materials, electricity, fuels, containers, etc. Purchases and transfers in of goods for resale Charges for commission and subcontract work Repair and maintenance expenses Outward freight and cartage, motor vehicle running expenses, sales commission payments
<i>Equals:</i> Value of production	<i>Equals:</i> Value added

Even though the concept of value added is similar to value of production, direct comparison of 1968-69 and previous figures will not be possible because of the change in census units already mentioned which has resulted in the value added for the whole establishment being reported, not merely the value added for the manufacturing process. Comparison is also affected, of course, by the change in the scope of the manufacturing census due to the adoption of ASIC.

For a more detailed description of the Integrated Economic Censuses reference should be made to Chapter 31, Year Book No. 56.

## Summary of operations

The following table shows the summary of operations for manufacturing establishments.

**MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS, BY INDUSTRY  
SUB-DIVISION: AUSTRALIA, 1969-70 AND 1971-72**

Industry sub-division	ASIC code (a)	Number of estab- lish- ments opera- ting at end of June	Persons employed(b)			Wages and salaries \$m	Turn- over \$m	Stocks at 30 June		Pur- chases, trans- fers in and selected expen- ses \$m	Value added \$m	Fixed capital expen- diture(c) \$m
			Males No.	Females No.	Total No.			opening \$m	closing \$m			
1969-70												
Food, beverages and tobacco	21-2	4,702	141,787	50,176	191,963	615	4,440	533	570	3,155	1,322	149
Textiles	23	872	32,762	26,399	59,161	170	768	158	165	465	310	42
Clothing and footwear	24	3,332	26,540	95,751	122,291	286	1,007	161	176	570	452	20
Wood, wood products and furniture	25	5,878	71,458	9,810	81,268	238	974	132	138	546	434	27
Paper and paper products, printing	26	3,394	75,679	29,303	104,982	367	1,387	174	198	710	702	74
Chemical, petroleum and coal products	27	1,196	48,378	17,348	65,726	259	1,586	293	307	918	682	132
Non-metallic mineral products	28	1,818	47,369	4,997	52,366	200	835	106	117	438	408	69
Basic metal products	29	636	86,008	5,239	91,247	367	2,559	404	445	1,755	846	238
Fabricated metal products	31	4,924	97,230	21,417	118,647	404	1,513	252	276	861	676	54
Transport equipment	32	1,496	133,435	14,764	148,199	535	2,199	380	417	1,324	911	104
Other machinery and equipment	33	4,662	144,132	48,301	192,433	667	2,490	585	648	1,429	1,124	82
Miscellaneous manufacturing	34	2,766	45,291	23,066	68,357	220	930	151	168	547	400	40
Total manu- facturing		35,676	950,069	346,571	1,296,640	4,329	20,686	3,326	3,623	12,716	8,267	1,031
1971-72												
Food, beverages and tobacco	21-2	4,423	148,130	53,460	201,590	790	5,295	620	675	3,666	1,684	180
Textiles	23	873	30,539	24,647	55,186	191	812	171	182	489	334	29
Clothing and footwear	24	3,216	25,096	91,043	116,139	324	1,143	181	190	630	522	19
Wood, wood products and furniture	25	5,884	70,744	10,340	81,084	280	1,077	150	154	590	496	45
Paper and paper products, printing	26	3,588	77,792	28,536	106,328	445	1,616	217	225	806	818	81
Chemical, petroleum, and coal products	27	1,165	47,976	17,634	65,610	314	1,827	327	341	1,037	804	106
Non-metallic mineral products	28	1,854	46,208	5,120	51,328	238	1,002	129	142	519	496	59
Basic metal products	29	627	86,964	5,884	92,848	454	2,657	506	535	1,802	884	444
Fabricated metal products	31	5,170	97,836	22,500	120,336	484	1,774	308	331	973	824	63
Transport equipment	32	1,426	135,807	16,083	151,890	669	2,531	446	504	1,542	1,047	136
Other machinery and equipment	33	4,899	141,391	48,198	189,589	796	2,808	692	716	1,536	1,297	91
Miscellaneous manufacturing	34	3,022	46,655	24,201	70,856	272	1,094	177	191	611	497	46
Total manu- facturing		36,147	955,138	347,646	1,302,784	5,257	23,637	3,921	4,187	14,200	9,703	1,298

(a) Australian Standard Industrial Classification.  
fixed tangible assets less disposals.

(b) Average over whole year. Includes working proprietors.

(c) Outlay on

**Employment**

The statistics on the number of persons employed shown in the following table relates to the average whole year employment including working proprietors, and including those working at separately located administrative offices and ancillary units in the State.

It should be noted that persons employed in each State (and their wages and salaries) relate to those employed at establishments, administrative offices or ancillary units located in that State, even though the administrative offices or ancillary units may have served establishments located in another State.

**MANUFACTURING ESTABLISHMENTS—MALES, FEMALES AND PERSONS EMPLOYED  
BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES, 1968-69, 1969-70 AND 1971-72**

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>MALES EMPLOYED</b>										
Food, beverages and tobacco	21-2	48,605	45,602	26,775	12,661	9,465	4,228	351	443	148,130
Textiles	23	9,636	16,456	890	1,470	457	1,630	..	..	30,539
Clothing and footwear	24	7,991	14,423	1,259	1,033	297	93	..	..	25,096
Wood, wood products and furniture	25	23,823	17,655	11,050	6,947	6,699	4,256	59	255	70,744
Paper and paper products, printing	26	29,369	25,628	7,081	5,224	4,260	5,126	97	1,007	77,792
Chemical, petroleum and coal products	27	21,879	16,723	2,741	2,526	2,711	1,396	..	..	47,976
Non-metallic mineral products	28	19,562	11,946	5,216	3,762	4,200	948	218	356	46,208
Basic metal products	29	54,624	10,595	3,986	9,326	4,721	3,681	(b)	(b)	86,964
Fabricated metal products	31	38,424	30,819	9,616	9,530	7,827	1,179	130	311	97,836
Transport equipment	32	41,452	51,291	11,926	25,107	4,815	1,047	(b)	(b)	135,807
Other machinery and equipment	33	62,435	49,847	7,671	14,858	5,379	1,053	(b)	(b)	141,391
Miscellaneous manufacturing	34	18,463	19,897	3,030	3,788	1,218	219	..	40	46,655
<b>Total manufacturing</b>	<b>1971-72</b>	<b>376,263</b>	<b>310,882</b>	<b>91,241</b>	<b>96,232</b>	<b>52,049</b>	<b>24,856</b>	<b>1,014</b>	<b>2,601</b>	<b>955,138</b>
	<b>1969-70</b>	<b>380,596</b>	<b>306,959</b>	<b>88,413</b>	<b>94,601</b>	<b>50,963</b>	<b>25,371</b>	<b>821</b>	<b>2,345</b>	<b>950,069</b>
	<b>1968-69</b>	<b>373,427</b>	<b>297,411</b>	<b>88,546</b>	<b>91,011</b>	<b>51,771</b>	<b>24,892</b>	<b>804</b>	<b>2,109</b>	<b>929,971</b>

<b>FEMALES EMPLOYED</b>										
Food, beverages and tobacco	21-2	17,807	17,203	7,157	5,149	4,135	1,753	98	158	53,460
Textiles	23	7,933	12,131	1,135	1,194	227	2,027	..	..	24,647
Clothing and footwear	24	33,620	47,349	5,175	3,242	1,443	214	..	..	91,043
Wood, wood products and furniture	25	3,457	2,660	1,665	1,124	1,066	326	3	39	10,340
Paper and paper products, printing	26	12,021	9,238	2,491	1,832	1,579	941	35	399	28,536
Chemical, petroleum and coal products	27	10,234	5,915	472	563	370	80	..	..	17,634
Non-metallic mineral products	28	2,206	1,702	281	383	424	79	17	28	5,120
Basic metal products	29	3,184	1,268	247	674	375	130	(b)	(b)	5,884
Fabricated metal products	31	9,825	7,177	1,826	2,394	1,023	196	18	41	22,500
Transport equipment	32	4,972	8,379	581	1,715	228	200	(b)	(b)	16,083
Other machinery and equipment	33	24,647	16,192	1,135	5,296	754	127	(b)	(b)	48,198
Miscellaneous manufacturing	34	10,709	10,093	962	1,838	544	40	..	15	24,201
<b>Total manufacturing</b>	<b>1971-72</b>	<b>140,615</b>	<b>139,307</b>	<b>23,127</b>	<b>25,404</b>	<b>12,168</b>	<b>6,113</b>	<b>180</b>	<b>732</b>	<b>347,646</b>
	<b>1969-70</b>	<b>143,147</b>	<b>138,746</b>	<b>22,102</b>	<b>23,815</b>	<b>11,634</b>	<b>6,389</b>	<b>123</b>	<b>615</b>	<b>346,571</b>
	<b>1968-69</b>	<b>138,385</b>	<b>134,240</b>	<b>21,686</b>	<b>22,069</b>	<b>10,842</b>	<b>6,182</b>	<b>118</b>	<b>544</b>	<b>334,066</b>

<b>PERSONS EMPLOYED</b>										
Food, beverages and tobacco	21-2	66,412	62,805	33,932	17,810	13,600	5,981	449	601	201,590
Textiles	23	17,569	28,587	2,025	2,664	684	3,657	..	..	55,186
Clothing and footwear	24	41,611	61,772	6,434	4,275	1,740	307	..	..	116,139
Wood, wood products and furniture	25	27,280	20,315	12,715	8,071	7,765	4,582	62	294	81,084
Paper and paper products, printing	26	41,390	34,866	9,572	7,056	5,839	6,067	132	1,406	106,328
Chemical, petroleum and coal products	27	32,113	22,638	3,213	3,089	3,081	1,476	..	..	65,610
Non-metallic mineral products	28	21,768	13,648	5,497	4,145	4,624	1,027	235	384	51,328
Basic metal products	29	57,808	11,863	4,233	10,000	5,096	3,811	(b)	(b)	92,848
Fabricated metal products	31	48,249	37,996	11,442	11,924	8,850	1,375	148	352	120,336
Transport equipment	32	46,424	59,670	12,507	26,822	5,043	1,247	(b)	(b)	151,890
Other machinery and equipment	33	87,082	66,039	8,806	20,154	6,133	1,180	(b)	(b)	189,589
Miscellaneous manufacturing	34	29,172	29,990	3,992	5,626	1,762	259	..	55	70,856
<b>Total manufacturing</b>	<b>1971-72</b>	<b>516,878</b>	<b>450,189</b>	<b>114,368</b>	<b>121,636</b>	<b>64,217</b>	<b>30,969</b>	<b>1,194</b>	<b>3,333</b>	<b>1,302,784</b>
	<b>1969-70</b>	<b>523,743</b>	<b>445,705</b>	<b>110,515</b>	<b>118,416</b>	<b>62,597</b>	<b>31,760</b>	<b>944</b>	<b>2,960</b>	<b>1,296,640</b>
	<b>1968-69</b>	<b>511,812</b>	<b>431,651</b>	<b>110,232</b>	<b>113,080</b>	<b>62,613</b>	<b>31,074</b>	<b>922</b>	<b>2,653</b>	<b>1,264,037</b>

(a) Australian Standard Industrial Classification. (b) Not available for publication.



## Wages and salaries

The following table shows wages and salaries of all employees of manufacturing establishments including those working at separately located administrative offices and ancillary units in the State. Drawings of working proprietors are not included.

**MANUFACTURING ESTABLISHMENTS—WAGES AND SALARIES BY  
INDUSTRY SUB-DIVISION: STATES AND TERRITORIES, 1968-69, 1969-70 AND 1971-72**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	269	255	126	63	51	22	2	2	790
Textiles	23	63	100	6	9	3	11	..	..	191
Clothing and footwear	24	117	177	16	10	4	1	..	..	324
Wood, wood products and furniture	25	99	72	41	26	26	15	..	1	280
Paper and paper products, printing	26	178	146	35	28	23	27	1	6	445
Chemical, petroleum and coal products	27	156	107	15	14	15	7	..	..	314
Non-metallic mineral products	28	105	63	25	18	20	4	1	2	238
Basic metal products	29	280	59	23	45	28	19	(b)	(b)	454
Fabricated metal products	31	201	153	42	45	36	5	1	2	484
Transport equipment	32	207	271	51	116	20	4	(b)	(b)	669
Other machinery and equipment	33	375	281	34	76	25	4	(b)	(b)	796
Miscellaneous manufacturing	34	114	118	13	20	6	1	..	..	272
Total manufacturing	1971-72	2,164	1,801	426	470	256	119	6	15	5,257
	1969-70	1,788	1,497	332	386	208	102	4	11	4,329
	1968-69	1,618	1,342	309	348	183	95	4	9	3,908

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

## Turnover

The following table shows the value of turnover of manufacturing establishments. The figures include sales of goods whether produced by the establishment or not, transfers out of goods to other establishments of the same enterprise, bounties and subsidies on production, plus all other operating revenue from outside the enterprise, such as commission, repair and service revenue and the value of capital work done on own account. Rents, leasing revenue, interest (other than hire purchase), royalties and receipts from the sale of fixed tangible assets are excluded.

**MANUFACTURING ESTABLISHMENTS—TURNOVER, BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69, 1969-70 AND 1971-72**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	1,590	1,869	981	375	308	150	13	10	5,295
Textiles	23	267	432	21	40	11	40	..	..	812
Clothing and footwear	24	423	637	39	32	10	2	..	..	1,143
Wood, wood products and furniture	25	379	273	148	115	91	66	1	4	1,077
Paper and paper products, printing	26	642	548	126	113	71	100	2	16	1,616
Chemical, petroleum and coal products	27	909	564	145	73	100	36	..	..	1,827
Non-metallic mineral products	28	399	256	122	86	99	21	7	12	1,002
Basic metal products	29	1,506	282	273	235	222	136	(b)	(b)	2,657
Fabricated metal products	31	711	567	162	169	138	20	3	5	1,774
Transport equipment	32	681	1,148	233	376	79	12	(b)	(b)	2,531
Other machinery and equipment	33	1,341	980	129	257	88	11	(b)	(b)	2,808
Miscellaneous manufacturing	34	445	497	55	70	23	3	..	..	1,094
Total manufacturing	1971-72	9,293	8,055	2,433	1,942	1,240	596	29	50	23,637
	1969-70	8,277	6,995	2,022	1,764	1,029	542	20	37	20,686
	1968-69	7,399	6,336	1,869	1,584	920	487	20	31	18,646

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

## Purchases, transfers in and selected expenses

The following table gives details of the value of purchases, transfers in and selected expenses. Figures include purchases of materials, fuel, power, containers, etc., plus transfers in of goods from other establishments of the enterprise, plus charges for commission and sub-contract work, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments.

**MANUFACTURING ESTABLISHMENTS—PURCHASES, TRANSFERS IN AND SELECTED EXPENSES, BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES, 1968-69, 1969-70 AND 1971-72**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	1,084	1,302	705	253	211	99	8	6	3,666
Textiles	23	158	266	13	26	7	21	..	..	489
Clothing and footwear	24	242	350	17	16	4	1	..	..	630
Wood, wood products and furniture	25	208	155	73	68	46	38	1	2	590
Paper and paper products, printing	26	320	280	64	53	32	53	..	4	806
Chemical, petroleum and coal products	27	495	321	100	43	56	21	..	..	1,037
Non-metallic mineral products	28	207	133	64	43	50	9	4	7	519
Basic metal products	29	988	185	194	156	182	95	(b)	(b)	1,802
Fabricated metal products	31	387	309	94	93	75	11	2	2	973
Transport equipment	32	386	702	155	243	50	5	(b)	(b)	1,542
Other machinery and equipment	33	740	524	75	138	52	5	(b)	(b)	1,536
Miscellaneous manufacturing	34	240	287	32	38	13	1	..	..	611
Total manufacturing	1971-72	5,454	4,814	1,584	1,169	777	359	18	25	14,200
	1969-70	5,002	4,307	1,346	1,085	626	318	13	19	12,716
	1968-69	4,440	3,860	1,225	970	564	300	11	17	11,388

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Stocks**

Statistics on the value of opening and closing stocks at 30 June are shown in the following table. Figures include all the stocks of materials, fuels, etc., and finished goods and work-in-progress of the establishment whether located at the establishment or elsewhere.

**MANUFACTURING ESTABLISHMENTS—OPENING AND CLOSING STOCKS 1968-69, 1969-70 AND 1971-72 BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>OPENING STOCKS AT 30 JUNE 1971</b>										
Food, beverages and tobacco	21-2	191	237	67	81	22	22	2	..	620
Textiles	23	60	89	4	7	2	10	..	..	171
Clothing and footwear	24	68	99	8	5	1	..	..	..	181
Wood, wood products and furniture	25	44	38	20	16	14	14	..	..	146
Paper and paper products, printing	26	83	79	17	11	9	16	..	2	217
Chemical, petroleum and coal products	27	171	106	19	10	15	6	..	..	327
Non-metallic mineral products	28	56	32	15	10	13	2	1	1	129
Basic metal products	29	253	51	81	57	35	28	(b)	(b)	506
Fabricated metal products	31	125	105	25	28	20	4	..	1	308
Transport equipment	32	132	200	27	73	10	3	(b)	(b)	446
Other machinery and equipment	33	306	287	25	58	15	1	(b)	(b)	692
Miscellaneous manufacturing	34	71	80	9	12	3	1	..	..	177
Total manufacturing		1,558	1,403	317	368	160	108	3	4	3,921
<b>CLOSING STOCKS AT 30 JUNE 1972</b>										
Food, beverages and tobacco	21-2	210	253	73	93	24	22	2	..	675
Textiles	23	63	95	5	7	2	10	..	..	182
Clothing and footwear	24	73	102	8	5	2	..	..	..	190
Wood, wood products and furniture	25	48	40	21	16	15	14	..	..	154
Paper and paper products, printing	26	87	81	17	13	9	17	..	2	225
Chemical, petroleum and coal products	27	184	107	17	12	14	6	..	..	341
Non-metallic mineral products	28	63	36	16	10	13	3	1	1	142
Basic metal products	29	264	56	83	58	39	35	(b)	(b)	535
Fabricated metal products	31	132	115	29	30	20	4	..	1	331
Transport equipment	32	144	232	32	81	10	3	(b)	(b)	504
Other machinery and equipment	33	323	286	27	60	18	2	(b)	(b)	716
Miscellaneous manufacturing	34	75	87	11	13	4	1	..	..	191
Total manufacturing		1,666	1,490	338	399	169	117	4	5	4,187
Opening stocks	1969-70	1,334	1,197	254	301	135	99	2	4	3,326
	1968-69	1,247	1,126	236	274	120	95	2	3	3,102
Closing stocks	1969-70	1,442	1,294	291	336	153	101	3	3	3,623
	1968-69	1,328	1,192	252	303	133	105	2	4	3,320

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

## Value added

The statistics on value added contained in the following table have been calculated by adding to the value of turnover the increase (or deducting the decrease) in the value of stocks, and deducting the value of purchases, transfers in and selected expenses. A more detailed description of the method of deriving value added is given on page 731.

**MANUFACTURING ESTABLISHMENTS—VALUE ADDED, BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69, 1969-70 AND 1971-72**

(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	527	583	281	134	100	50	4	3	1,684
Textiles	23	113	173	9	15	5	19	..	..	334
Clothing and footwear	24	186	289	22	17	6	1	..	..	522
Wood, wood products and furniture	25	174	121	76	48	46	29	1	2	496
Paper and paper products, printing	26	325	269	64	61	39	47	1	12	818
Chemical, petroleum and coal products	27	426	244	43	33	42	16	..	..	804
Non-metallic mineral products	28	199	127	59	43	48	12	3	5	496
Basic metal products	29	529	101	81	80	44	48	(b)	(b)	884
Fabricated metal products	31	331	269	71	78	62	8	1	3	824
Transport equipment	32	307	479	83	141	29	8	(b)	(b)	1,047
Other machinery and equipment	33	618	455	56	120	39	6	(b)	(b)	1,297
Miscellaneous manufacturing	34	210	217	25	32	11	1	..	..	497
<b>Total manufacturing</b>	<b>1971-72</b>	<b>3,947</b>	<b>3,328</b>	<b>871</b>	<b>803</b>	<b>472</b>	<b>245</b>	<b>11</b>	<b>26</b>	<b>9,703</b>
	<b>1969-70</b>	<b>3,382</b>	<b>2,785</b>	<b>713</b>	<b>715</b>	<b>420</b>	<b>226</b>	<b>9</b>	<b>17</b>	<b>8,267</b>
	<b>1968-69</b>	<b>3,041</b>	<b>2,541</b>	<b>660</b>	<b>643</b>	<b>368</b>	<b>197</b>	<b>10</b>	<b>15</b>	<b>7,475</b>

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

## Number of establishments

The following table shows the number of establishments, in each State, in operation at 30 June for the years indicated. These figures relate to manufacturing establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

**MANUFACTURING ESTABLISHMENTS—NUMBER OF ESTABLISHMENTS IN OPERATION  
AT END OF YEAR 1968-69, 1969-70 AND 1971-72 BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES**

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust
Food, beverages and tobacco	21-2	1,340	1,197	805	457	423	168	21	12	4,423
Textiles	23	337	384	51	49	31	21	..	..	873
Clothing and footwear	24	1,266	1,606	160	106	65	13	..	..	3,216
Wood, wood products and furniture	25	1,956	1,473	961	524	561	364	11	34	5,884
Paper and paper products, printing	26	1,555	1,156	299	251	228	62	5	32	3,588
Chemical, petroleum and coal products	27	552	357	79	78	78	21	..	..	1,165
Non-metallic mineral products	28	689	445	249	173	211	54	18	15	1,854
Basic metal products	29	231	210	59	66	44	14	2	1	627
Fabricated metal products	31	2,076	1,470	562	463	473	86	17	23	5,170
Transport equipment	32	460	452	169	164	141	34	4	2	1,426
Other machinery and equipment	33	2,184	1,652	326	382	285	60	2	8	4,899
Miscellaneous manufacturing	34	1,237	1,007	281	266	187	36	..	8	3,022
<b>Total manufacturing</b>	<b>1971-72</b>	<b>13,883</b>	<b>11,409</b>	<b>4,001</b>	<b>2,979</b>	<b>2,727</b>	<b>933</b>	<b>80</b>	<b>135</b>	<b>36,147</b>
	<b>1969-70</b>	<b>13,631</b>	<b>11,394</b>	<b>3,848</b>	<b>2,977</b>	<b>2,705</b>	<b>945</b>	<b>65</b>	<b>111</b>	<b>35,676</b>
	<b>1968-69</b>	<b>13,633</b>	<b>11,563</b>	<b>4,032</b>	<b>2,994</b>	<b>2,585</b>	<b>951</b>	<b>69</b>	<b>112</b>	<b>35,939</b>

(a) Australian Standard Industrial Classification.

## Electricity and gas establishments

As mentioned on page 729, the electricity and gas industries, which were previously included in the Annual Factory Census, have been the subject of separate censuses as from 1968-69. In addition the electricity and gas census has been extended to cover distribution as well as production. The following tables show statistics for each State and Territory, and for Australia for the years 1968-69, and 1969-70.

For electricity and gas, the basic census unit is an exception to the general concept of the standardised unit. Because of the nature of the activities of electricity and gas undertakings, the single



operating location basis is not suitable. The establishment unit used consists of all locations, including administrative offices and ancillary units, mainly concerned with the production and/or distribution of electricity or gas, operated by the undertaking in the one State. The use of this concept is one of the reasons for the number of electricity and gas establishments since 1968-69 being considerably less than in previous years. The other main reason is that until 1967-68, a number of electricity generating stations operated by enterprises principally for their own use were included. However, as from 1968-69 these generating stations have been included in the electricity census only if sales and transfers of electricity exceeded \$100,000 in value.

**ELECTRICITY AND GAS ESTABLISHMENTS(a), SUMMARY OF OPERATIONS  
STATES AND TERRITORIES, 1969-70 AND 1971-72**

State or Territory	Number of establishments operating during year	Persons employed(b)			Wages and salaries (\$m)	Turnover (c) (\$m)	Stocks at 30 June		Purchases, transfers in and selected expenses (\$m)	Value added (\$m)	Fixed capital expenditure(d) (\$m)
		Males (No.)	Females (No.)	Total (No.)			Opening (\$m)	Closing (\$m)			
1969-70											
New South Wales—											
Electricity . . .	51	23,628	2,358	25,986	113	580	45	47	277	305	165
Gas . . .	34	2,769	502	3,271	12	44	3	3	18	27	2
Victoria—											
Electricity . . .	13	13,558	1,311	14,869	64	289	21	23	94	197	96
Gas . . .	8	3,447	574	4,021	19	57	6	5	17	39	20
Queensland—											
Electricity . . .	21	7,760	772	8,532	32	158	11	11	63	94	52
Gas . . .	7	592	115	707	2	10	1	1	4	6	1
South Australia—											
Electricity . . . }	18	5,576	185	5,761	23	91	7	6	26	64	25
Gas . . . }											
Western Australia—											
Electricity . . . }	57	3,598	291	3,889	15	62	6	7	18	44	39
Gas . . . }											
Tasmania—											
Electricity . . . }	6	2,552	202	2,754	12	39	5	5	1	39	44
Gas . . . }											
Northern Territory—											
Electricity . . . }	6										
Gas . . . }											
Australian Capital Territory—		(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Electricity . . . }	1										
Gas . . . }											
Australia—											
Electricity . . .	166	55,753	5,071	60,824	255	1,213	94	99	480	738	425
Gas . . .	56	8,338	1,312	9,650	39	129	11	10	44	84	27
1971-72											
New South Wales—											
Electricity . . .	49	23,469	2,395	25,864	140	707	50	54	345	367	154
Gas . . .	23	2,352	524	2,876	13	49	3	3	18	30	4
Victoria—											
Electricity . . . }	13	16,409	1,816	18,225	99	375	27	28	136	239	116
Gas . . . }	4										
Queensland—											
Electricity . . .	21	8,038	837	8,875	45	194	13	14	79	116	66
Gas . . .	7	565	104	669	3	12	1	1	5	7	1
South Australia—											
Electricity . . . }	16	6,174	358	6,532	34	106	9	9	29	78	24
Gas . . . }											
Western Australia—											
Electricity . . . }	48	4,275	331	4,606	23	82	8	8	23	60	81
Gas . . . }											
Tasmania—											
Electricity . . . }	5	2,727	244	2,971	15	48	5	5	2	46	35
Gas . . . }											
Northern Territory—											
Electricity . . . }	6										
Gas . . . }											
Australian Capital Territory—		(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Electricity . . . }	1										
Gas . . . }											
Australia—											
Electricity . . .	153	57,089	5,391	62,480	332	1,444	105	112	591	861	452
Gas . . .	40	7,409	1,298	8,707	41	148	10	11	57	91	43

(a) Covers production and distribution. (b) At end of June. Includes working proprietors. (c) In some States electricity is produced by certain undertakings and sold to other undertakings for distribution. In these States sales of electricity are duplicated due to inclusion of the bulk sales to these distributors. (d) Outlay on fixed tangible assets less disposals. (e) Not available for publication.

## Principal factory products

The factory production of certain commodities is shown in the monthly and quarterly publications of this Bureau, and in the bulletin *Manufacturing Commodities—Principal Articles Produced*.

The following table shows the total recorded production of some of the principal articles (i.e. of those for which production can be represented in quantitative terms) manufactured in Australia. A more complete list, where available, is published in the aforementioned bulletin.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA 1968-69 TO 1971-72

Commodity code	Article		1968-69 (a)	1969-70 (a)	1970-71 (a)	1971-72 (a)
401.29	Acid (in terms of 100%)—					
401.37	Hydrochloric . . . . .	tons	35,326	37,439	42,524	46,622
401.37	Nitric . . . . .	"	63,876	123,617	117,976	138,100
401.57	Sulphuric . . . . .	'000 tons	1,851	1,734	1,586	1,728
171.03, 05	Aerated and carbonated waters . . . . .	'000 gal	137,133	144,532	159,520	170,172
657.03, 05	Air-conditioning equipment—					
657.13, 15	Room air conditioners (refrigerated) . . . . .	No.	50,788	38,966	34,252	41,843
657.21, 22, 23	Room air coolers (evaporative coolers) . . . . .	"	27,263	46,147	41,429	50,007
475.04, 06, 07, 85	Package unit air conditioners . . . . .	"	8,463	7,610	7,977	9,277
	Asbestos cement building sheets (finished) . . . . .	'000 sq yd	38,112	40,868	40,240	43,829
	Bags, leather, fibre, etc.—					
864.31	Handbags—					
864.33	Leather . . . . .	No.	456,574	475,841	n.a.	509,214
864.39	Plastic . . . . .	'000	2,032	2,278	n.a.	1,655
946.01-52	Other . . . . .	No.	510,942	478,773	n.a.	383,430
864.11-19	Hessian and calico bags . . . . .	'000 doz	3,880	(b)	n.a.	3,948
864.41-49	Suitcases, kitbags and trunks . . . . .	'000	(c)1,542	(c)1,606	n.a.	1,749
	All other(d) . . . . .	"	1,948	1,655	n.a.	1,346
652.01	Bath heaters—					
652.03, 04	Electric . . . . .	No.	10,528	7,831	7,724	7,394
652.05	Gas . . . . .	"	6,267	3,953	2,981	3,358
779.02-55	Solid fuel . . . . .	"	6,389	4,703	7,716	6,516
	Bathing suits . . . . .	doz	344,676	367,526	(e)340,351	(e)337,862
671.01	Baths—					
671.03-08	C.I.P.E. . . . .	'000 }	182	183	190	200
	Other . . . . .	"				
685.13, 15	Batteries, wet cell type—					
685.17, 19	Auto (S.L.I.) 6 volts . . . . .	'000	445	420	378	380
685.33, 35	Auto (S.L.I.) 12 volts . . . . .	"	1,720	1,822	1,894	2,095
685.43-65	Radio, homelighter, fencer . . . . .	No. of 2 volt cells	90,338	76,202	59,997	57,396
172.02, 04, 06	Traction, plant and other . . . . .	"	75,205	136,081	146,516	157,971
064.21	Beer (excluding waste beer) . . . . .	'000 gal	326,771	341,627	356,149	366,189
372.52-66	Biscuits . . . . .	'000 lb	231,403	244,589	249,458	256,958
	Blankets . . . . .	'000	1,610	1,682	1,687	1,531
152.02	Boots and shoes (see Footwear)					
172.21	Bran (wheat) . . . . .	'000 tons (2,000 lb)	185	181	173	147
777.41, 49	Brandy . . . . .	'000 proof gal	1,100	1,343	n.a.	1,728
064.03-13	Brassieres . . . . .	doz	782,877	735,093	820,717	819,263
066.01-31	Bread (2 lb loaf equivalent) . . . . .	'000	796,505	803,451	n.a.	813,875
472.01, 03	Breakfast food, cereal (ready to eat) . . . . .	'000 cwt	812	1,004	1,040	1,089
261.41	Bricks, clay . . . . .	million	1,627	1,694	1,669	1,744
051.31	Briquettes, brown coal . . . . .	'000 tons	1,471	1,539	1,376	1,287
	Butter . . . . .	'000 lb	439,202	494,269	448,024	431,579
773.51, 71, 81	Cardigans, sweaters, etc. . . . .	'000 doz	1,402	1,582	1,552	1,930
474.02	Cement, Portland . . . . .	'000 tons	4,075	4,428	4,611	4,807
051.36-46	Cheese (green weight) . . . . .	'000 lb	164,972	168,219	171,004	174,556
183.02, 11	Cigarettes and cigars . . . . .	"	55,130	65,900	(f)66,847	64,622
373.10-52	Cloth (including mixtures)—					
374.02-16	Cotton(g) . . . . .	'000 sq yd	57,452	56,986	56,495	56,387
374.20-34	Rayon and acetate . . . . .	"	36,178	34,914	31,893	27,285
372.02-50	Synthetic (non-cellulosic) . . . . .	"	32,275	37,762	39,029	50,012
	Wool . . . . .	"	32,173	32,404	18,881	26,800
435.22	Coke—					
435.12	Metallurgical . . . . .	'000 tons	3,647	3,969	4,470	4,070
475.90	Other . . . . .	"	407	272	n.a.	131
	Concrete, ready mixed . . . . .	'000 cu yd	9,267	10,843	11,684	12,681
104.02-18	Confectionery—					
104.21-29	Chocolate . . . . .	'000 lb	107,980	102,371	109,211	116,875
452.04	Other . . . . .	"	115,702	123,249	125,425	130,210
	Copper, refined(h) . . . . .	tons	94,786	103,680	113,500	128,759
653.31	Coppers (wash boilers)—					
653.33, 34	Electric . . . . .	No.	6,939	(b)	3,972	2,792
653.51	Gas . . . . .	"	5,195	1,502	335	273
	Inserts . . . . .	"	14,854	8,885	n.a.	(b)

(a) Includes Northern Territory and Australian Capital Territory. (b) Not available for publication.  
(c) Excludes code 864.19 bags and cases other than those of leather, fibre, plastic, canvas. (d) Excludes canvas water bags. (e) Excludes codes 779.51, 55 infants' and babies' swim-wear. (f) Includes tobacco. (g) Excludes tyre-cord fabric. (h) Primary origin only.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA, 1968-69 TO 1971-72—continued

Commodity code	Article	1968-69 (a)	1969-70 (a)	1970-71 (a)	1971-72 (a)
171.06, 10	Cordials and syrups . . . . .	'000 gal 10,580	11,412	13,338	15,347
777.01-29	Corsets and corselets . . . . .	doz 369,685	344,666	271,384	251,248
611.01	Cycles (complete) . . . . .	No. 114,671	126,091	124,491	131,039
804.01	Dentifrices (toothpaste) . . . . .	'000 lb 11,424	11,856	n.a.	12,227
503.06	Electric generators—				
503.08	Non-automotive—Alternating current . . . . .	No. 3,043	2,790	n.a.	3,081
499.42, 44	Direct current . . . . .	535	297	n.a.	139
523.76-78	Electricity . . . . .	mil. kWh 48,898	53,887	69,828	59,501
502.22-39	Electrodes for manual welding . . . . .	'000 lb 49,061	51,301	53,410	51,706
	Engines, internal combustion(b) . . . . .	'000 293	364	312	355
	Essences, flavouring—				
139.31	Domestic . . . . .	gal 114,140	114,337	n.a.	91,705
139.35	Industrial . . . . .	„ 960,253	942,752	n.a.	1,103,616
802.11, 12	Face powder . . . . .	'000 lb 260	309	n.a.	278
696.01, 03, 05	Fans, electric . . . . .	No. 426,774	429,018	374,167	405,196
045.01, 51	Fish, canned (including fish loaf) . . . . .	'000 lb 14,890	15,536	11,352	13,938
	Floorboards—				
332.06	Australian timber . . . . .	'000 super ft 158,187	156,459	n.a.	131,373
332.08	Imported timber . . . . .	„ 748	974	n.a.	426
	Floor coverings—				
841.01-07	Textile . . . . .	'000 sq yd 16,142	18,312	20,836	25,826
841.31-41,	Smooth surface . . . . .	„ 13,443	15,096	15,631	15,672
841.54-68	Underfelts, underlays, etc.(c) . . . . .	„ 18,485	20,273	21,218	20,881
841.85	Floor polishers, electric . . . . .	No. 53,388	53,701	49,720	35,998
692.22	Flour—				
068.01	Self-raising . . . . .	'000 cwt 995	827	n.a.	836
062.01, 10, 32	Wheaten(d) . . . . .	'000 tons (2,000 lb) 1,395	1,410	1,447	1,327
791	Footwear (not rubber)—				
	Boots, shoes and sandals . . . . .	'000 pairs 38,176	39,105	36,500	35,968
	Slippers . . . . .	„ 4,059	4,026	3,533	3,932
	Fruit juices, natural—				
074.61-79	Single strength . . . . .	'000 gal 16,821	20,410	n.a.	19,270
074.76, 82, 89	Concentrated(e) . . . . .	„ 1,799	2,074	n.a.	3,158
434.09	Gas (town)(f) . . . . .	'000 therms 360,141	410,713	n.a.	616,392
	Gloves—				
781.01, 03	Dress . . . . .	doz pairs 25,604	16,339	(g)	(g)
	Work—				
781.06, 07, 31	Sewn(h) . . . . .	'000 doz pairs } 2,553	2,333	2,445	3,168
781.11-29	Dipped . . . . .	„ } 69,253	78,417	97,069	116,034
127.21	Glucose . . . . .	'000 lb 39,763	42,178	46,067	50,131
832.58, 59	Golf clubs . . . . .	doz 39,763	42,178	46,067	50,131
	Handkerchiefs				
786.01	Men's . . . . .	'000 doz 1,986	1,800	n.a.	1,672
786.11	Women's . . . . .	„ 1,343	1,275	n.a.	1,249
	Heaters, room—				
651.01, 03	Solid fuel . . . . .	No. 23,104	16,153	9,648	9,767
651.11-17	Radiators and electric fires . . . . .	„ 801,546	714,197	813,000	812,632
651.21, 22, 26, 27	Gas fires and space heaters, domestic(f) . . . . .	„ 51,787	44,649	55,988	58,421
281.04	Ice . . . . .	'000 tons 112	120	n.a.	112
051.61	Ice cream(j) . . . . .	'000 gal 39,591	42,172	41,965	43,229
051.87, 89	Infants' and invalids' milk-based health beverages(k) . . . . .	'000 lb 23,907	25,581	23,853	30,106
	Ink, printing—				
419.31	News . . . . .	„ 20,413	23,962	n.a.	24,787
419.43-59	Other . . . . .	„ 17,318	18,044	n.a.	25,830
	Iron and steel—				
442.04, 08	Pig iron . . . . .	'000 tons 5,703	5,862	6,240	5,911
442.80-83	Steel ingots, open hearth and electric(l) . . . . .	„ 6,598	6,764	6,800	6,376
442.28	Blooms and slabs (m) . . . . .	„ 5,759	5,787	5,765	5,481
693.51, 61, 63	Irons, electric (hand, domestic) . . . . .	No. 550,989	591,663	555,613	592,964
076.60	Jams (including conserves, jellies, etc.) . . . . .	'000 lb 92,360	82,373	85,228	77,000
391.04	Lard . . . . .	„ 6,914	6,207	n.a.	5,258
	Lawn mowers—				
699.52, 53	Petrol, rotary . . . . .	No. 210,112	269,573	290,224	293,350
699.41, 45, 55, 61	Other types(n) . . . . .	„ 18,902	19,763	16,995	19,219
453.04	Lead refined(o) . . . . .	'000 tons 176	186	152	188

(a) Includes Northern Territory and Australian Capital Territory. (b) Petrol and diesel. Excludes car, motor cycle, truck, tractor, aero, and marine engines. (c) New basis—Needled (or bonded) felts of jute or jute/hair mixtures (for all purposes) as from July 1966. (d) Includes wheatmeal for baking and sharps and other flour. (e) Excludes grape must. (f) Includes natural gas. (g) Not available for publication. (h) Excludes fabric liners for dipped gloves but includes moulded or heat-sealed work gloves. (i) Excludes L.P. and T.L.P. gas—capacity of under 25,000 B.T.U./hr. (j) Includes ice-cream combined with other confections. Including those aerated milk-based confections which contain 10% or more butterfat. (k) Includes malted milk and milk sugar (lactose). (l) Year ended 31 May. (m) Including semi-permanent mould castings, investment casting and diecasting of iron and steel. (n) Petrol cylinder, electric and hand. (o) Includes lead content of lead only from primary sources, but excludes lead-silver bullion produced for export.



**QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA, 1968-69 TO 1971-72—continued**

<i>Commodity code</i>	<i>Article</i>		<i>1968-69 (a)</i>	<i>1969-70 (a)</i>	<i>1970-71 (a)</i>	<i>1971-72 (a)</i>
	Leather—					
	Dressed or finished—					
301.43-65	Chrome tanned (including retanned) . . .	'000 sq ft	75,250	70,279	n.a.	65,904
301.31-37, 83-89	Vegetable tanned, by weight . . .	'000 lb	10,934	9,997	n.a.	8,122
301.67, 69	Vegetable tanned, by measurement . . .	'000 sq ft	3,529	3,405	n.a.	2,507
311.08, 14, 18	Tanned or dressed skins with hair or wool retained(b) . . .	doz	111,404	103,779	n.a.	85,276
	Lime—					
275.43, 45	Crushed . . .	tons	184,535	208,206	n.a.	203,060
479.18	Hydrated . . .	"	142,632	162,138	n.a.	136,982
479.12	Quick . . .	"	396,382	427,501	n.a.	416,511
802.21	Lipstick . . .	'000 lb	117	107	n.a.	100
063.11-31	Malt (excluding extract) . . .	'000 bushel	14,141	14,593	17,404	20,532
	Margarine—					
121.01	Table . . .	'000 lb	35,106	34,635	35,804	38,800
121.06, 08	Other . . .	"	100,708	105,302	110,906	119,988
	Mattresses and bed bases—					
844.01	Box spring . . .	No.	143,845	167,791	191,946	206,237
844.21	Inner spring . . .	"	660,007	720,456	721,462	695,508
844.11	Woven wire, link mesh and spring . . .	"	688,646	665,960	650,102	618,632
844.41, 51, 61	Other . . .	"	330,545	358,516	n.a.	376,784
027.02-76	Meat, canned(c) . . .	'000 lb	100,916	103,037	119,903	118,261
	Meters (domestic)—					
702.01	Electricity consumption . . .	No.	248,655	268,917	312,785	215,226
703.01	Gas consumption . . .	"	60,893	64,493	66,287	67,581
703.11	Water consumption . . .	"	143,912	174,475	184,547	157,844
	Milk, condensed, concentrated and evaporated—					
051.21, 22	Full cream, sweetened . . .	'000 lb	40,452	35,551	36,809	36,828
051.24, 25, 26, 27	Full cream, unsweetened . . .	"	89,511	125,945	136,240	105,451
051.28	Skim . . .	"	19,990	46,715	36,133	25,330
	Milk powder—					
051.72, 73	Full cream . . .	"	53,590	50,659	56,512	63,412
051.76-79	Skim . . .	"	157,885	207,245	201,737	204,324
051.81, 82	Buttermilk or mixed skim and buttermilk . . .	"	33,937	40,490	37,865	32,028
503.17-32	Motors, electric . . .	'000	3,185	3,357	3,249	3,466
	Motor vehicles, finished—					
581.02-08	Cars . . .	No.	289,246	334,802	320,510	340,122
581.10-16	Station wagons . . .	"	53,621	55,734	54,023	51,931
582.04	Utilities . . .	"	33,720	37,753	33,156	34,105
582.06	Panel vans . . .	"	15,812	18,013	18,059	20,330
582.08-24	Truck and truck-type vehicles . . .	"	1,422	1,052	799	3,357
	Motor vehicles, partly finished—					
581.22-28	Cars, station wagons, utilities, vans . . .	"	1,379	2,183	1,509	2,244
582.31, 32	Trucks and truck-type vehicles . . .	"	24,279	26,678	22,985	18,986
582.33-46	Motor vehicle safety belts . . .	"	1,011,887	1,142,302	n.a.	3,020,493
465.16, 17	Nails . . .	tons	24,175	24,186	23,920	24,007
782.03, 04	Neckties . . .	doz	452,706	463,548	n.a.	619,573
	Oatmeal and rolled oats—					
062.61, 63	For porridge, etc. . . . .	'000 cwt	306	301	288	339
062.65	Other . . . . .	"	114	153	n.a.	(d)
393.08-90, 394.01-54	Oils, vegetable, crude . . . . .	'000 lb	96,832	106,731	127,107	112,654
	Paints, etc.—					
412.02-20	Paints (not water) and enamels ready for use . . .	'000 gal	16,908	17,930	19,112	18,263
412.28	Paints (not water) in paste form . . .	'000 lb	1,899	1,948	n.a.	n.a.
412.22, 24	Lacquers (nitro-cellulose) . . .	'000 gal	1,481	1,444	1,124	1,107
412.32	Tinting colours, packaged ready for sale . . .	"	75	98	n.a.	n.a.
412.54	Stains and clear varnishes packaged ready for sale . . .	"	931	1,063	n.a.	n.a.
	Water paints—					
412.42, 44, 46	Emulsion type . . .	"	4,306	4,913	n.a.	n.a.
412.48, 50	In powder form . . .	'000 lb	776	666	n.a.	n.a.
412.64, 66	Thinners . . .	'000 gal	4,307	4,587	4,681	4,910
	Paper—					
351.11	Newsprint . . .	tons	123,935	170,576	175,860	178,610
351.17-79	Other . . .	"	443,420	485,746	498,199	517,811
352.11-33	Paperboard . . .	"	342,406	370,677	379,142	375,999
975.04, 09, 11	Perambulators, pushers and strollers . . .	No.	148,774	158,400	172,167	176,747
	Petrol—					
431.12	For blending and refining . . .	million gal	(d)	(d)	(d)	(d)
431.04, 08, 20	Other (all types) . . .	"	1,983	1,990	2,230	2,707
479.22	Plaster of paris . . .	tons	281,646	297,946	145,044	309,776
479.32, 33	Plaster sheets . . .	'000 sq yd	31,434	35,748	41,100	41,040
334.32, 34, 36, 38	Plywood, $\frac{1}{8}$ inch basis . . .	'000 sq ft	232,926	259,711	n.a.	233,091
152.06	Pollard . . .	tons (2,000 lb)	311,783	311,570	313,404	282,588

(a) Includes Northern Territory and Australian Capital Territory. (b) Excludes codes 311.14 rabbit, and 311.20 water rat. (c) Excludes poultry and baby food. (d) Not available for publication.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA, 1968-69 TO 1971-72—continued

Commodity code	Article		1968-69 (a)	1969-70 (a)	1970-71 (a)	1971-72 (a)
	Preserves—					
	Fruit					
076.01-50	Canned or bottled . . . . .	'000 lb	508,116	678,791	664,388	559,515
074.01	Pulp and puree—single strength . . . . .	'000 cwt	76	88	n.a.	88
	Vegetables—					
094.02-49	Canned or bottled . . . . .	'000 lb	196,327	206,678	195,892	251,234
092.02, 06, 19	Quick frozen . . . . .	"	157,064	174,976	131,643	201,996
	Pyjamas—					
774.21, 23	Men's and boys' (suits only) . . . . .	doz	460,168	485,577	471,319	468,068
774.51-58	Women's and girl's (incl. nightdresses) . . . . .	"	762,269	779,394	811,562	882,614
832.65,85	Racquet frames (all types) . . . . .	No.	17,701	16,663	16,699	19,019
643.01, 03, 15-37	Radio receiving sets (including radiograms) . . . . .	No.	659,232	729,514	745,828	770,343
	Records (phonograph)—					
646.32, 35, 62, 65	Single play (78 and 45 rpm) . . . . .	'000	6,534	6,913	6,366	5,965
646.37, 41, 51, 67, 71, 81	Extended play . . . . .	"	1,601	1,623	1,298	805
646.43, 45, 53, 55, 73, 75, 83, 85	Long play . . . . .	"	9,523	11,262	14,207	15,066
657.32, 41, 53	Refrigerators, domestic electric . . . . .	No.	286,832	255,575	241,010	283,527
403.404	Resins, plastic and synthetic, for all purposes . . . . .	'000 cwt	3,900	4,409	5,040	5,618
061.67, 69	Rice, polished, unpolished and broken . . . . .	"	2,915	3,445	n.a.	3,985
369.11	Ropes and cables (excluding wire) . . . . .	cwt	(b)	(b)	(b)	115,671
372.70, 72, 374.59	Rugs . . . . .	'000	187	215	280	186
123.18-25	Sauce . . . . .	'000 pints	43,152	40,793	n.a.	51,221
062.04	Semolina . . . . .	tons (2,000 lb)	24,543	23,938	25,203	26,409
773.02-31	Shirts (men's and boys') . . . . .	'000 doz	2,527	2,566	2,407	2,545
653.01	Sink heaters, electric . . . . .	No.	9,552	8,744	9,594	9,315
671.11-18	Sinks, steel and other (standard size) . . . . .	"	225,823	256,925	238,000	239,902
805.01-13	Soap, for personal toilet use . . . . .	'000 cwt	505	534	557	(b)
	Socks and stockings—					
775.51-82	Men's and youths' . . . . .	'000 doz pairs	1,884	1,953	1,859	1,831
775.01-39	Women's and maids' . . . . .	"	5,894	6,118	7,313	8,326
775.91-776.42	Children's and infants' . . . . .	"	1,109	1,140	1,054	1,142
	Soup—					
122.02, 09	Canned . . . . .	'000 pints	78,948	74,418	73,839	90,637
122.13, 15	Dry-mix . . . . .	'000 lb	10,927	11,114	12,737	12,968
127.11-19	Starch . . . . .	"	206,142	233,400	280,237	292,478
401.53	Stearine (stearic acid) . . . . .	"	12,890	13,613	n.a.	14,308
461.20	Steel, constructional, fabricated . . . . .	tons	559,025	671,415	n.a.	685,291
	Stoves, ovens and ranges, domestic cooking—					
661.01-11	Electric(c) . . . . .	No.	210,804	221,379	219,868	227,314
661.26, 31, 34	Gas(d) . . . . .	"	84,880	70,204	82,486	89,343
662.01, 03	Solid fuel . . . . .	"	13,128	10,626	8,453	7,612
	Sugar—					
102.01, 02	Raw (94 net litre) . . . . .	'000 tons	2,725	2,179	n.a.	2,749
102.12	Refined . . . . .	"	643	671	669	664
405.36	Sulphate of ammonia . . . . .	tons	106,214	106,339	174,206	109,352
415.07	Superphosphate . . . . .	'000 tons	(e)3,821	(e)3,522	3,066	3,366
803.61	Talcum powder . . . . .	'000 lb	9,547	9,978	n.a.	10,446
	Tallow (including dripping), rendering—					
391.14, 16	Edible . . . . .	"	176,459	177,096	n.a.	205,976
391.24	Inedible . . . . .	"	364,444	535,372	n.a.	650,694
643.49-65	Television sets . . . . .	No.	283,380	319,657	337,017	361,169
645.52-66	Television picture tubes . . . . .	"	394,922	420,022	502,715	444,410
	Tiles, roofing—					
475.30	Cement . . . . .	'00 sq ft	1,485,612	1,666,433	1,637,075	1,828,231
472.12	Terracotta . . . . .	"				
	Timber—					
	From native logs—					
331.01-07	Hardwood, etc. . . . .	'000 super ft	1,113,679	1,132,201	n.a.	1,049,260
331.09-19	Softwood . . . . .	"	295,594	302,686	n.a.	331,396
331.23, 25	From imported logs . . . . .	"	11,307	9,537	n.a.	3,806
661.21, 23	Toasters, electric (domestic) . . . . .	No.	392,281	371,333	380,582	373,399
183.21-28	Tobacco . . . . .	'000 lb	7,601	6,876	n.a.	6,698
094.51	Tomato juice . . . . .	'000 gal	1,970	1,879	3,547	3,330
094.53	" paste and puree . . . . .	'000 pints	13,663	13,431	n.a.	16,528
094.57	" pulp . . . . .	'000 cwt	101	131	n.a.	(b)
373.58-64	Towels . . . . .	'000 doz	838	913	898	936
671.51-59	Toilet cisterns . . . . .	No.	409,920	459,920	402,749	430,205
683.03-11	Transformers, chokes and ballasts, for distribution of power and light, etc. . . . .	"	15,362	16,168	15,172	14,946
622.01-07, 19	Tubes, pneumatic(f) . . . . .	'000	4,587	(g)4,738	4,734	4,580
369.21-27	Twine (all types) . . . . .	cwt	266,258	218,745	227,119	241,647
621.31-37	Tyres, pneumatic(f) . . . . .	'000	(h)7,368	(h)8,146	(h)8,106	(h)8,048
863.01	Umbrellas, street and general purpose . . . . .	No.	620,490	602,790	n.a.	731,658
774.01-18, 41-47, 60, 62, 91-97	Underwear (men's women's, children's) . . . . .	'000 doz	(i)6,922	(i)7,073	7,370	6,745

(a) Includes Northern Territory and Australian Capital Territory. (b) Not available for publication. (c) Includes wall ovens but excludes cooking tops and portable units. (d) Upright and elevated (with ovens) including wall ovens, but excluding hotplates, stovettes, etc. (e) Source: Department of Primary Industry, includes ammonium phosphate. (f) Excludes bicycle tubes and tyres. (g) Excludes code 622.07 aero tubes. (h) Excludes code 621.35. (i) Excludes codes 774.16 and 774.18.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA, 1968-69 TO 1971-72—*continued*

Commodity code	Article		1968-69 (a)	1969-70 (a)	1970-71 (a)	1971-72 (a)
692.01	Vacuum cleaners (domestic)	No.	151,581	156,340	175,824	173,512
	Wash basins—					
671.37	Earthenware	"	184,625	230,314	212,997	232,538
671.33-35	Pressed steel	"	97,375	98,290	104,312	97,691
693.02-18	Washing machines, household, electric	"	302,639	315,607	304,554	311,962
	Weatherboards—					
332.12	Australian timber	'000 super ft	13,483	14,473	n.a.	14,193
332.14	Imported timber	"	3,018	2,326	n.a.	2,345
152.14	Wheatmeal for stock feed	tons (2,000 lb)	231,460	224,722	313,192	345,222
519.01	Wheelbarrows (metal)	No.	121,760	110,826	n.a.	144,080
	Wine, beverage—					
172.42	Fortified	'000 gal	12,066	13,799	11,082	13,181
172.46	Unfortified	"	15,987	19,629	18,274	20,762
341.31-45	Wood pulp (air dried)	tons	403,907	464,992	546,579	498,334
242.07-11	Wool, scoured or carbonised	tonne(b)	73,693	72,576	62,804	68,254
242.32	Wool tops, pure	'000 lb	43,196	42,122	41,200	38,565
	Yarn (including mixtures)—					
364.11-50	Cotton	"	62,124	64,526	63,545	59,647
363.47-75	Woollen	"	36,081	39,807	42,158	42,210
363.17-31	Wool worsted	"	18,370	18,650	19,544	19,102
365.38-66	Rayon and acetate, spun	"	10,506	12,145	11,803	12,291
365.90, 366.03 04, 16, 29, 30, 42, 55, 56, 88, 96, 97	Synthetic (non-cellulosic) fibres spun	"	10,412	11,771	15,069	15,452
457.04	Zinc, refined(c)	tons	228,198	257,674	250,000	270,000

(a) Includes Northern Territory and Australian Capital Territory. (b) Items 242.07 to 242.11 are published in metric units of measurement (1 Imperial ton equals 1.016 metric tonne). (c) Primary origin only includes small quantities of zinc dust.



## CHAPTER 22

### RURAL INDUSTRY

This chapter is divided into four major parts:

- Introduction, dealing with the disposal of Crown lands, closer settlement and war service settlement and general rural activity in Australia;
- Agricultural production;
- Pastoral production; and
- Other rural industries, which includes the dairying, pig, poultry and bee-farming industries.

For greater detail on the subjects dealt with in this chapter see the annual bulletins *Rural Industries* (10.29), *Value of Production* (10.24) (10.25) (10.26) (10.27), and *Manufacturing Commodities* (12.7) (regarding butter, cheese, etc., factories) issued by this Bureau. Current information on commodities produced is obtainable in the *Quarterly Summary of Australian Statistics* (1.3), *Monthly Review of Business Statistics* (1.4), *Monthly Bulletin of Production Statistics* (12.14), and *Digest of Current Economic Statistics* (monthly) (1.5). The series of bulletins *Classification of Rural Holdings by Size and Type of Activity* (10.28) (see page 747) shows particulars of rural holdings classified by size, nature and area of crops, and numbers of livestock, and also according to main type of activity. The mimeographed annual *Apparent Consumption of Foodstuffs and Nutrients* (10.10) contains details of the production and utilisation of foodstuffs. The following mimeographed publications also contain considerable detail on the particular subjects dealt with.

**General.** *Value of Primary Production (excluding Mining) and Indexes of Price and Quantum of Farm Production* (annual) (10.27), *Value of Primary Production (excluding Mining) (Preliminary Statement)* (annual) (10.25), *Gross Value of Primary Production (excluding Mining) (Preliminary Estimates)* (annual) (10.24), *Rural Land Use, Improvements, Agricultural Machinery and Labour* (annual) (10.59), *New Tractors: Receipts, Sales and Stocks* (quarterly) (12.18), and *New Agricultural Machinery* (quarterly) (12.1), *Estimates of Gross Indebtedness of Agricultural Producers, Australia* (annual) (10.62).

**Agricultural production.** *Crop Statistics* (annual) (10.58), *Agricultural Statistics (Preliminary Statement)* (annual) (10.57), *The Wheat Industry* (four a year) (10.35) (10.36) (10.52) (10.53), *The Fruit Growing Industry* (annual) (10.11), *Grape Production and Utilisation* (annual) (10.61), *Principal Agricultural Statistics: Australia, Preliminary Estimates* (annual) (10.63).

**Pastoral production.** *Livestock Statistics Australia, Preliminary Estimates* (annual) (10.15), *Livestock Statistics* (annual) (10.14), *The Meat Industry* (monthly) (10.16), *Wool Production* (annual) (10.39), *Wool Production and Utilisation* (annual) (10.38), *Sheep Numbers, Shearing and Wool Production (Provisional Estimates)* (10.69) and *Wool Production, Sheep Numbers and Shearing (Preliminary Estimates)* (10.56).

**Other rural production.** *The Dairying Industry* (monthly) (10.6) and annual (10.5), *Chicken Hatchings and Poultry Slaughtering* (monthly) (10.44), *Production Summaries No. 36—Preserved Milk Products* and *No. 55—Butter and Cheese* (monthly) (12.16), and *Bee Farming* (annual) (10.3).

Detailed particulars of the early development of various aspects of Australian rural industry are given in previous issues of the Year Book up to No. 53 (see, for example No. 53, pages 885, 888, 891–2).

**Rural debt.** For estimated figures of rural debt to specified lenders for the years 1967–68 to 1971–72 see page 533 of this Year Book.

Throughout this chapter yearly periods for area and production of crops relate to years ended 31 March. Other periods in respect of e.g. factory and trade statistics relate to years ended 30 June.

## INTRODUCTION

### Disposal of Crown lands

#### Land legislation and tenures

The following sections contain figures showing the extent of the different land tenures in the several States and Territories, classified under broad headings indicating the nature of the tenure, together with some general descriptive matter. Information in greater detail, descriptions of the land

tenure systems of the several States and the internal Territories, and conspectuses of land legislation in force and of the systems of land tenure were provided in Year Book No. 48 and previous issues (see also Year Book No. 50, page 85 and List of Special Articles, etc. preceding General Index to this Volume).

### Free grants and reservations

Provision exists in all States except Tasmania for the disposal of Crown lands for public purposes by free grants, and in all States for the temporary and or permanent reservation of Crown lands for public purposes. In the Northern Territory any Crown lands not subject to any right of, or contract for, purchase may be resumed for public purposes, and the whole or any portion of the lands resumed may be reserved for that purpose. In the Australian Capital Territory, under the *Seat of Government (Administration) Act 1910-72*, Crown lands may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act.

### AREAS OF CROWN LANDS RESERVED: STATES AND TERRITORIES, 1968 TO 1972 (\*000 acres)

Year	N.S.W.(a)	Vic.(a)	Qld(b)	S.A.(a)	W.A.(a)	Tas.(a)	N.T.(a)	Total(c)
1968 . .	15,872	(b)8,952	27,833	22,919	80,658	5,327	60,988	222,549
1969 . .	15,849	n.a.	28,209	22,919	80,772	6,313	61,124	n.a.
1970 . .	15,793	(d)7,787	28,466	22,925	84,018	6,374	62,217	227,580
1971 . .	15,747	(d)7,790	28,636	22,939	90,333	6,619	62,348	234,412
1972 . .	15,667	(d)7,793	28,582	22,943	96,395	6,643	62,348	240,371

(a) At 30 June. (b) At 31 December. (c) Excludes the Australian Capital Territory. (d) Excludes areas set aside for roads.

The purposes for which areas were reserved are given hereunder for the latest year available as set out in the table above.

**New South Wales.** For travelling stock, 4,913,641 acres; forest reserves, 1,582,899 acres; water and camping reserves, 736,042 acres; mining reserves, 982,352 acres; recreation and parks, 733,791 acres; other reserves, 6,718,240 acres; total 15,666,965 acres.

**Victoria.** Water reserves, 212,310 acres; forest and timber reserves, 5,805,596 acres; national parks, 506,919 acres; public parks and camping reserves, 120,812 acres; native flora and fauna, 136,048 acres; other reserves (excluding roads), 1,011,071 acres; total, 7,792,756 acres.

**Queensland.** For timber reserves, 1,721,525 acres; State forests and national parks, 10,365,561 acres; Aboriginal reserves, 6,847,734 acres; streets, surveyed roads and stock routes, 4,322,268 acres; general reserves, 5,324,431 acres; total, 28,581,519 acres.

**South Australia.** Total area of surveyed roads, railways and other reserves, 22,943,482 acres including 18,842,665 acres set apart as Aboriginal reserves.

**Western Australia.** For State forests, 4,506,717 acres; timber reserves, 170,727 acres; other reserves, 91,717,845 acres; total, 96,395,289 acres.

**Tasmania.** For forest reserves, 5,593,000 acres; national parks, 1,050,000 acres; total, 6,643,000 acres.

**Northern Territory.** For Aboriginal, defence and public requirements, 62,348,000 acres.

### Conditional and unconditional purchases of freehold

Crown lands in the States may be disposed of by unconditional purchase at public auction or by certain other forms of purchase (for details see Year Book No. 48, pages 91-2). Conditional purchases of various types may also be made. In the Northern Territory only 0.1 per cent of the total area is alienated, the remainder being held under lease or licence, or reserved for various purposes or unoccupied. In the Australian Capital Territory about 11 per cent of the area is alienated or in process of alienation in consequence of contracts existing prior to the establishment of the Territory.

### Leases and licences

Well over half the area of the States of New South Wales and South Australia and of the Northern Territory and about four-fifths of Queensland are occupied under some form of lease or licence. In Victoria, only about one-tenth of the area is leased or licensed, more than half being alienated; in Western Australia, more than one-third is leased or licensed, most of the remainder being unoccupied.

in Tasmania about one-third is leased or licensed, while about one-quarter of the area of the State is occupied by the Crown or unoccupied, and the remainder alienated. Areas leased or licensed in the States are held under Crown lands Acts, closer settlement Acts, mining Acts, etc., and in the Territories under various Ordinances.

*Land Acts and Ordinances.* The types of lease and licence granted under land legislation cover a wide range, and vary with each State or Territory. The following are examples: grazing or pastoral, settlement and closer settlement, settlement purchase, conditional and unconditional purchase, perpetual and Crown; however, the variations of these forms and the special forms of lease and licence which exist would extend this list considerably. Details of the various types in existence are given in Year Book No. 48, pages 93-4, and some detail is included in the tables on pages 878-81 of Year Book No. 53.

**AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND  
FORESTRY: STATES AND TERRITORIES, 1968 TO 1972**  
(<sup>'000</sup> acres)

Year	N.S.W.(a)	Vic.(a)	Qld(b)	S.A.(a)	W.A.	Tas. (a)	N.T. (a)(c)	A.C.T. (a)(c)	Total
1968	110,499	(b)5,636	353,163	149,530	(a)244,804	766	191,595	254	1,056,247
1969	112,250	n.a.	346,946	149,327	(a)245,240	699	192,966	251	n.a.
1970	111,501	(a)5,469	342,003	149,951	(a)247,010	698	197,033	251	1,053,916
1971	111,131	(a)5,535	339,024	149,651	(b)252,034	851	199,136	243	1,057,605
1972	111,026	(a)5,568	336,689	148,676	(b)251,852	581	200,074	236	1,054,702

(a) Year ended 30 June. (b) Year ended 31 December. (c) Leases and licences for all purposes.

### Closer settlement and war service settlement

#### Closer settlement

Particulars of the methods of acquisition and disposal of land for the closer settlement of civilians and returned service personnel (1914-18 War) in the several States are given in issues of the Year Book up to No. 22 (*see* No. 22, pages 163-9), and the results of the operations of the several schemes have appeared in subsequent issues in considerable detail. However, the amalgamation in some States of closer settlement records with those of other authorities has since made it impossible to obtain up-to-date figures for those States and for Australia as a whole. Page 96 of Year Book No. 48 contains particulars as at 30 June 1960 of the areas and costs for those States for which separate information is available.

#### War Service Land Settlement Scheme

The War Service Land Settlement Scheme provides for the settlement on the land of eligible ex-servicemen from the 1939-45 War and the Korea-Malaya operations. Finance for capital expenditure under the scheme in South Australia, Western Australia and Tasmania and for special loans to New South Wales and Victoria is provided through Loan (War Service Land Settlement) Acts. Finance for other aspects of the scheme in all States is provided by annual parliamentary appropriation. The *States Grants (War Service Land Settlement) Act* 1952 provides that the responsible Commonwealth Minister may make grants of financial assistance to the States under such terms as he may from time to time determine. At 30 June 1970, 9,129 farms had been allotted from a total area of 13,936,731 acres acquired and no further farms are to be provided.

Particulars of expenditure on war service land settlement, to 30 June 1968, are given in Year Book No. 55, pages 716-17.

### Alienation and occupation of Crown lands

Detailed particulars of the alienation and occupation of Crown lands in the several States and Territories are given in previous issues of the Year Book up to No. 53 (*see* No. 53, pages 878-81).

The following table provides a summary for each State and Territory, and for Australia as a whole, of the alienation and occupation of Crown lands in 1972.



## ALIENATION AND OCCUPATION OF CROWN LANDS: STATES AND TERRITORIES, 1972

State or Territory	Private lands				Crown lands				Total area
	Alienated		In process of alienation		Leased or licensed		Other(a)		
	'000 acres	Per cent	'000 acres	Per cent	'000 acres	Per cent	'000 acres	Per cent	
N.S.W.(b)	62,195	31.4	4,240	2.1	112,562	56.8	19,040	9.6	198,037
Vic.(b)	33,379	59.3	379	0.7	5,568	9.9	16,920	30.1	56,246
Qld(c)	28,179	6.6	34,353	8.0	340,160	79.7	24,188	5.7	426,880
S.A.(b)	16,038	6.6	288	0.1	148,676	61.1	78,243	32.2	243,245
W.A.(c)	34,852	5.6	13,445	2.2	255,478	40.9	320,814	51.3	624,589
Tas.(b)	6,680	39.6	240	1.4	5,099	30.2	4,866	28.8	16,885
N.T.(b)	298	0.1	..	..	200,074	60.1	132,607	39.8	332,979
A.C.T.(b)(d)	58	9.6	6	1.1	236	39.2	301	50.1	601
Australia	181,679	9.6	52,951	2.8	1,067,853	56.2	596,979	31.4	1,899,462

(a) Occupied by Crown; reserved; unoccupied; unreserved. (b) At 30 June. (c) At 31 December, 1971. (d) Includes Jervis Bay area.

## Number and area of rural holdings

## Number and area

A holding in Australia has been defined by statisticians on a more or less uniform basis, and discrepancies which exist are not of sufficient importance to prevent comparisons. For the purpose of these statistics a holding has been defined as land of one acre or more in extent used for the production of agricultural produce (including fruit and vegetables) or for the raising of livestock (including poultry) and the production of livestock products.

There are considerable fluctuations from time to time in the numbers of very small holdings, and it is very difficult to determine in some cases whether or not they are rural holdings within the definition. In addition, in the very dry parts, such as the far west of New South Wales and Queensland and the remoter parts of South Australia and Western Australia, there are large areas of marginal lands sporadically occupied for extensive grazing under short-term lease or other arrangement, and the areas so occupied tend to fluctuate with the seasons. Similarly, there are rugged areas in the mountain country of some States which are also only occasionally occupied.

## RURAL HOLDINGS: NUMBER AND AREA, STATES AND TERRITORIES, 1967-68 TO 1971-72

Year	N.S.W.	Vic.(a)	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
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## NUMBER OF RURAL HOLDINGS

1967-68	76,225	72,802	43,694	29,058	23,116	10,631	305	196	256,027
1968-69	76,103	71,056	44,074	29,137	23,004	10,384	317	195	254,270
1969-70	75,908	69,498	43,829	29,035	22,937	10,159	322	193	251,881
1970-71	75,365	68,555	43,399	29,087	22,592	9,926	384	187	249,495
1971-72	74,960	67,714	43,389	29,095	21,997	9,807	419	187	247,568

TOTAL AREA OF RURAL HOLDINGS  
(<sup>0</sup>000 acres)

1967-68	171,767	39,564	380,993	160,765	275,334	6,579	174,385	350	1,209,737
1968-69	171,020	39,182	378,956	162,109	276,174	6,591	177,942	346	1,212,320
1969-70	170,630	39,057	380,218	162,692	280,819	6,517	182,116	339	1,222,387
1970-71	171,068	38,945	382,253	162,584	283,107	6,501	184,943	337	1,229,739
1971-72	170,504	39,249	381,540	160,980	282,864	6,442	192,468	329	1,234,377

(a) In 1967-68 the lists of land holdings used in the collection of agricultural and pastoral statistics in Victoria were reconciled with lists of rateable land of one acre or more in extent as recorded by municipalities for rating purposes.

## Land utilisation of rural holdings

The following table shows the purposes for which the land on the rural holdings referred to in the preceding paragraphs was used.

RURAL HOLDINGS: LAND UTILISATION, 1967-68 TO 1971-72  
(<sup>'000 acres</sup>)

Year	Area used for crops(a)	Land lying fallow(b)	Area under sown grasses and clovers(c)	Balance of holdings(d)	Total area of holdings
1971-72—					
New South Wales . . . . .	10,342	2,372	14,567	143,222	170,504
Victoria . . . . .	4,780	2,235	20,869	11,365	39,249
Queensland . . . . .	4,983	434	5,748	370,375	381,540
South Australia . . . . .	5,629	994	7,893	146,465	160,980
Western Australia . . . . .	9,269	871	16,863	255,861	282,864
Tasmania . . . . .	165	27	2,106	4,144	6,442
Northern Territory . . . . .	18	2	315	192,134	192,468
Australian Capital Territory . . . . .	3	..	101	225	329
Australia . . . . .	35,189	6,936	68,461	1,123,790	1,234,377
1970-71 . . . . .	33,101	8,995	69,267	1,118,377	1,229,739
1969-70 . . . . .	38,641	7,127	64,784	1,111,835	1,222,387
1968-69 . . . . .	41,012	9,525	59,747	1,102,036	1,212,320
1967-68 . . . . .	35,884	9,340	57,235	1,107,278	1,209,737

(a) Excludes (i) duplication on account of area double cropped, except for New South Wales and South Australia, and (ii) clovers and grasses cut for hay and seed which have been included in Area under sown grasses and clovers, and differs therefore from crop area figures shown later in this chapter. (b) Excludes short or summer fallow. (c) Includes paspalum. (d) Used for grazing, lying idle, etc.

## Classification by size and type of activity

Some of the information obtained from the 1968-69 Agricultural Census has been classified by size of principal characteristics (area of holdings, area of sown grasses and clovers, area of selected crops, and numbers of livestock). In addition, all holdings have been classified according to type of activity. Tables showing this information, for statistical divisions and States, and an outline of the methods used have been published in a series of bulletins *Classification of Rural Holdings by Size and Type of Activity*, 1968-69. Similar information was published in a series of bulletins for the years 1959-60 and 1965-66. Classifications of holdings by size of principal characteristics are available for each State for the years 1947-48, 1949-50 and 1955-56.

## Employment on rural holdings

## Persons engaged

The following table shows, for each State and Territory, the recorded number of males working on rural holdings. Particulars for females are not available except for New South Wales and Victoria. Additional particulars relating to the number of males employed in agriculture up to 1941-42 are shown in Year Book No. 36, page 852, and previous issues. Similar details for later years are not available.

MALES(a) ENGAGED ON RURAL HOLDINGS: STATES AND TERRITORIES, 31 MARCH 1972

Males engaged	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Permanent—									
Owners, lessees or share-farmers . . . . .	53,646	55,086	38,220	21,225	19,892	6,515	207	114	194,905
Relatives of owner, lessee or share-farmer, over 15 years of age, not receiving wages or salary . . . . .	635	3,783	2,892	141	1,311	..	27	8	8,797
Employees, including managers and relatives working for wages or salary . . . . .	21,460	12,395	14,492	5,885	6,243	3,166	1,571	121	65,333
Total permanent males . . . . .	75,741	71,264	55,604	27,251	27,446	9,681	1,805	243	269,035
Temporary . . . . .	22,822	22,882	14,869	7,208	(b)	4,179	468	100	(b)
Total males . . . . .	98,563	94,146	70,473	34,459	(b)	13,860	2,273	343	(b)

(a) Details for females not available except for New South Wales and Victoria where 7,170 and 15,049 females respectively were engaged on rural holdings. (b) Not available for publication.

### Farm machinery on rural holdings

The tables following show the principal types of farm machinery on rural holdings in the States and Territories at 31 March 1972. Additional information was published in the statistical bulletin *Rural Land Use, Improvements, Agricultural Machinery and Labour, 1971-72* (10.59). A more detailed analysis of tractors on rural holdings according to type, horse-power, type of fuel used, and age of tractor was published in the statistical bulletin *Tractors on Rural Holdings—Australia, 31 March 1969*. Details of grain and seed harvesters on rural holdings at 31 March 1970, classified according to type of propulsion, width of cut, age and type of front were published in the statistical bulletin *Grain and Seed Harvesters on Rural Holdings, 31 March 1970*.

#### FARM MACHINERY ON RURAL HOLDINGS: STATES AND TERRITORIES, 31 MARCH 1972

Machinery	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Cultivating—</b>									
Rotary hoes and rotary tillers—									
Self-contained power unit . . . . .	8,404	6,676	3,437	3,340	1,728	1,204	69	26	24,884
Tractor-mounted or trailing type . . . . .	8,911	6,060	5,781	2,665	2,149	1,105	43	19	26,733
<b>Seeding and planting—</b>									
Grain drills—									
Combine type . . . . .	29,814	20,175	15,117	15,355	13,687	1,507	83	55	95,793
Other types . . . . .	5,776	7,202	1,961	4,485	3,404	2,093	11	27	24,959
Maize and cotton planters(a) . . . . .	(b)	837	9,260	(b)	(b)	(b)	22	(b)	(c)
Fertiliser distributors and broad-casters . . . . .	24,795	28,552	17,561	9,816	10,089	5,832	102	85	96,832
<b>Harvesting—</b>									
Grain and seed headers and harvesters(d)—									
Self-propelled . . . . .	4,946	1,803	3,434	2,807	1,906	118	18	8	15,040
Tractor drawn . . . . .	14,539	11,265	4,433	9,078	8,556	556	32	20	48,479
Pick-up balers . . . . .	12,146	14,822	3,689	5,582	4,570	2,044	44	45	42,942
Forage harvesters . . . . .	3,145	2,217	1,663	856	688	357	24	10	8,960
<b>Other—</b>									
Tractors—									
Wheel . . . . .	82,905	79,369	65,071	34,233	31,809	11,716	440	179	305,722
Crawler . . . . .	6,194	3,101	8,493	2,974	3,631	1,147	151	7	25,698

(a) Number of units, i.e. number of rows that can be planted simultaneously. (b) Not collected. (c) Not available.  
(d) Excludes reapers, binders, specialised clover harvesters and forage harvesters.

#### FARM MACHINERY ON RURAL HOLDINGS: AUSTRALIA 31 MARCH 1968 TO 1972

Machinery	31 March—				
	1968	1969	1970	1971	1972
<b>Rotary hoes and rotary tillers—</b>					
Self-contained power unit . . . . .	27,174	25,722	24,549	23,059	24,884
Tractor-mounted or trailing type . . . . .	20,333	21,581	20,837	23,264	26,733
<b>Seeding and planting—</b>					
Grain drills—					
Combine type . . . . .	94,094	94,650	94,917	93,567	95,793
Other types . . . . .	29,634	28,490	27,196	25,717	24,959
Maize and cotton planters . . . . .	13,826	(a)18,495	(a)18,646	(a)18,083	(b)
Fertiliser distributors and broad-casters . . . . .	95,853	97,119	98,434	98,117	96,832
<b>Harvesting—</b>					
Grain and seed headers and harvesters—					
Self-propelled . . . . .	11,953	13,213	13,191	13,871	15,040
Tractor drawn . . . . .	55,929	53,883	50,163	49,904	48,479
Pick-up balers . . . . .	38,211	40,142	41,237	42,187	42,942
Forage harvesters . . . . .	7,545	8,016	8,421	8,523	8,960
<b>Other—</b>					
Shearing machines (number of stands) . . . . .	195,542	196,286	195,352	n.a.	188,482
Milking machines (number of units) . . . . .	233,022	231,698	228,190	n.a.	209,805
Tractors—					
Wheel . . . . .	323,982	299,297	329,969	326,725	305,722
Crawler . . . . .		24,299			25,698

(a) Definition changed in 1969 when informants were asked to report in terms of numbers of units, i.e. the number of rows that can be planted simultaneously. Figures not strictly comparable with earlier years. (b) Not available.



### The soils of Australia

Year Book No. 52 contains an article (pages 873-9) on the soils of Australia which deals with the following matters: nature and development of Australian soils, including the agricultural development of soils, and types of Australian soils. A soil map of Australia and illustrations are included on plates 47 to 51 of Year Book No. 52.

### Soil improvement and conservation

#### Fertilisers

The bulk of Australia's requirements of nitrogenous and phosphatic fertilisers is supplied by the domestic industry. Requirements of potassic fertilisers are primarily imported. Raw materials and manufactured fertilisers which are not available in Australia are imported as required.

As a result of widespread deficiency of phosphorus in Australian soils, phosphatic fertilisers account for a large proportion of usage both on crops and pastures. During 1971-72 usage of nitrogen, phosphorus and potassium in elemental terms was approximately 122,295 tons, 369,412 tons and 69,372 tons respectively. This is equivalent to a usage ratio of 2 : 7 : 1.

Information regarding the area treated with artificial fertilisers and the quantity of artificial fertilisers (superphosphate, bonedust, nitrates, etc.) used in each State during the 1971-72 season is given in the following table.

AREA FERTILISED AND QUANTITY OF ARTIFICIAL FERTILISERS USED  
STATES AND TERRITORIES, 1971-72

State or Territory	Crops			Pastures			Total		
	Area fertilised	Super- phosphate used	Other artificial fertilisers used	Area fertilised	Super- phosphate used	Other artificial fertilisers used	Area fertilised	Super- phosphate used	Other artificial fertilisers used
	'000 acres	tons	tons	'000 acres	tons	tons	'000 acres	tons	tons
New South Wales .	6,008	241,229	65,047	7,011	400,890	17,738	13,018	642,119	82,785
Victoria . . . .	3,916	187,288	40,035	9,300	571,760	101,439	13,216	759,048	141,474
Queensland . . .	1,300	36,740	210,058	438	41,923	10,048	1,738	78,663	220,106
South Australia .	5,221	255,299	24,655	4,502	242,613	7,771	9,723	497,912	32,426
Western Australia .	9,019	433,329	59,724	11,425	589,978	38,302	20,444	1,023,307	98,026
Tasmania . . . .	145	12,887	10,645	1,235	86,576	22,210	1,380	99,463	32,855
Northern Territory	14	1,836	1,159	112	6,440	293	126	8,276	1,452
Australian Capital Territory . .	3	181	43	24	1,356	23	27	1,537	66
<b>Australia . . .</b>	<b>25,625</b>	<b>1,168,789</b>	<b>411,366</b>	<b>34,048</b>	<b>1,941,536</b>	<b>197,824</b>	<b>59,672</b>	<b>3,110,325</b>	<b>609,190</b>

Particulars of the quantity of artificial fertilisers used in each State and Territory during each of the seasons 1967-68 to 1971-72 are shown in the next table. These details include the quantity used for the top dressing of pasture lands.

QUANTITY OF ARTIFICIAL FERTILISERS USED: STATES AND TERRITORIES  
1967-68 TO 1971-72  
(Tons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	893,469	1,068,605	263,460	599,877	1,219,968	172,195	4,629	2,695	4,224,898
1968-69	897,893	954,807	264,973	580,756	1,323,293	160,462	5,117	2,195	4,189,496
1969-70	903,334	1,007,216	292,376	590,261	1,416,936	153,649	5,414	2,785	4,371,971
1970-71	828,228	916,249	289,870	538,515	1,230,296	140,025	5,643	2,106	3,950,932
1971-72	724,904	900,522	298,769	530,338	1,121,333	132,318	9,728	1,603	3,719,515

The chief sources of Australia's supplies of natural phosphate are Nauru, Christmas Island (Indian Ocean), Gilbert and Ellice Islands and Morocco. Sodium nitrate is obtained chiefly from Chile and the U.S.A.

## IMPORTS OF FERTILISERS: AUSTRALIA, 1967-68 TO 1971-72

Description	1967-68		1968-69		1969-70		1970-71		1971-72	
	cwt	\$'000	cwt	\$'000	cwt	\$'000	cwt	\$'000	cwt	\$'000
Fertilisers, Crude—										
Natural sodium nitrate	111,298	292	76,899	182	90,307	305	63,816	185	62,182	212
Natural phosphates, whether or not ground	65,915,602	32,162	63,531,304	31,606	52,986,234	28,109	41,483,953	22,174	32,564,484	18,157
Natural potassic salts, crude	..	..	..	..	..	..	102,420	152	..	..
Fertilisers, Manufactured—										
Mineral or chemical fertilisers, nitrogenous—										
Ammonium nitrate	323,037	1,031	410,795	1,317	327,091	1,201	288,324	954	53,048	164
Ammonium sulphate	2,264,628	3,379	1,392,998	1,707	238,649	465	8,908	20	7,388	13
Calcium ammonium nitrate	305,717	606	389,456	789	71,084	149	20,517	40	21,592	41
Sodium nitrate	49,429	98	25,939	73	9,997	22	41,352	110	20,365	66
Urea containing in the dry state more than 45% by weight of nitrogen	2,391,423	7,585	2,869,995	7,423	157,260	433	249,371	626	137,466	435
Other	27,854	109	13,611	65	12,419	40	18,651	58	11,103	32
Mineral or chemical fertilisers, phosphatic—										
Basic slag	1	..	..	..	..	..	..	..	..	..
Other (including super-phosphates)	606	2	280,418	406	32,463	97	61,828	132	47,892	218
Mineral or chemical fertilisers, potassic—										
Potassium chloride	2,288,755	3,195	2,371,086	2,749	2,203,561	2,684	2,679,761	4,045	2,567,429	3,350
Potassium sulphate	309,333	565	259,626	603	341,673	748	337,209	748	304,744	768
Other	4,405	10	67,938	105	117,528	152	48,571	66	17,546	54
Fertilisers, n.e.s.										
In the form of tablets, lozenges and similar prepared forms or in packs of gross weight not exceeding 10 kg	29,792	92	550	31	554	27	765	54	972	53
Other—										
Sodium nitrate mixed or combined with potassium nitrate	4,260	14	3,832	12	3,738	13	4,597	15	2,314	9
N.P.K. complete fertilisers	414,640	1,336	610,858	1,795	142,777	462	146,434	443	292,303	985
Mixed or composite fertilisers	262,720	1,041	98,729	316	155,541	476	7,385	22	862	10
Blood and bone	6,000	14	3,400	12	..	..	..	..	..	..
Other	133,908	598	591,339	1,607	199,123	673	18,740	117	6,308	68

Exports of fertilisers (manufactured locally) amounted to 1,012,000 cwt valued at \$1,311,000 in 1971-72 compared with 287,000 cwt valued at \$174,000 in 1970-71.

## Aerial agriculture

Extensive use is made of aircraft for top-dressing and seeding, for spraying and dusting of crops and pastures, and for pest and vermin extermination.

For 1956-57 (the first year for which data are available) the total area treated was 1,466,000 acres; in 1971-72 the total was 10,604,000 acres. The following table shows details of area treated and materials used for each State for the five years ended 31 March 1972.

## AERIAL AGRICULTURE, 1967-68 TO 1971-72

Year ended 31 March	Area topdressed and seeded	Area sprayed	Total area treated(a)	Materials used		Total flying time
	'000 acres	'000 acres	'000 acres	Super- phosphate tons	Seed '000 lb	hours
1972—						
New South Wales(b)	3,609	1,541	5,292	178,835	2,963	37,138
Victoria	1,208	244	1,582	67,433	167	11,767
Queensland(c)	863	(d)	1,590	(d)	1,161	12,049
South Australia	(d)	204	541	17,832	(d)	(d)
Western Australia	674	698	(d)	39,492	(d)	8,992
Tasmania	(d)	(d)	(d)	(d)	(d)	(d)
Australia	6,906	3,353	10,604	330,076	4,390	75,620
1971	8,165	2,778	11,320	410,773	2,450	83,692
1970	10,270	3,723	14,868	550,952	2,854	102,619
1969	9,474	4,580	14,416	436,589	4,125	99,639
1968	10,495	(d)	14,348	524,374	3,249	102,112

(a) Includes other types of treatment (rabbit baiting, etc.). (b) Includes details for the Australian Capital Territory.  
(c) Includes details for the Northern Territory. (d) Not available for publication.

**Pasture improvement**

An article on pasture improvement, which includes notes on indigenous and introduced species of grasses and which traces the development of pasture research in Australia, appears on pages 1001-2 of Year Book No. 49.

**Soil conservation**

Year Book No. 49 contains an article (pages 1003-4) on soil conservation which deals with the following matters: land use and soil erosion, agents of erosion, prevention and control, and the activities of various Commonwealth and State authorities which promote and co-ordinate research into the problems of soil erosion and the initiation of preventive measures.

**AGRICULTURAL PRODUCTION**

In general, statistics in this chapter relating to agricultural production are derived from returns supplied by approximately 248,000 farmers who utilise one acre or more of land for agricultural or pastoral purposes. The latest figures available are those for the year 1971-72. The returns are collected on a substantially uniform basis in all States at 31 March each year, and relate mainly to crops sown in the previous twelve months. Where harvests are not completed by March (e.g. potatoes), provision is made in some States for a special collection after the harvest is completed and in others for the inclusion of the total estimated yield expected from the complete harvest. In cases where additional data are available from marketing authorities or other sources these are used in conjunction with the annual census returns. The statistics published in this section are therefore shown in 'agricultural' years. For most purposes there will be little error involved in considering them as applying to years ended 30 June.

For more detailed information on period covered and details of the weights and measures used in recording production of agricultural commodities see introductory notes to the bulletin *Rural Industries*. Details of weights and measures are also included after the Contents of this Year Book.

**Progress, assistance and control****Progress of cultivation**

The following table shows the area of crops in each of the States and Territories of Australia at ten-yearly intervals since 1860-61 and during each of the eleven seasons 1961-62 to 1971-72.

**AREA OF CROPS(a): STATES AND TERRITORIES, 1860-61 TO 1971-72**  
(<sup>'000</sup> acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1860-61	246	387	4	359	25	153	..	..	1,174
1870-71	385	693	52	802	55	157	..	..	2,144
1880-81	606	1,549	114	2,087	64	141	..	..	4,561
1890-91	853	2,032	225	2,093	70	157	..	..	5,430
1900-01	2,447	3,114	458	2,370	201	224	..	..	8,814
1910-11	3,386	3,952	667	2,747	855	287	..	..	11,894
1920-21	4,465	4,490	780	3,231	1,805	297	..	2	15,070
1930-31	6,811	6,716	1,144	5,426	4,792	268	2	5	25,164
1940-41	6,375	4,467	1,734	4,255	4,027	254	..	6	21,118
1950-51	4,761	4,537	2,077	3,812	4,650	290	n.a.	6	20,133
1960-61	8,044	5,838	3,057	5,399	6,871	357	2	8	29,576
1961-62	8,288	5,626	3,216	5,024	7,112	364	2	7	29,639
1962-63	8,903	6,318	3,490	5,495	7,482	395	2	7	32,092
1963-64	8,997	6,102	3,665	5,975	6,915	380	3	8	32,045
1964-65	10,334	6,477	3,967	5,965	7,505	404	4	9	34,665
1965-66	9,052	6,219	4,119	6,030	8,680	386	4	8	34,498
1966-67	12,421	6,765	4,605	6,488	8,817	444	4	10	39,553
1967-68	11,343	5,457	4,653	5,414	8,877	262	14	5	36,024
1968-69	13,614	6,250	5,117	6,415	9,484	273	16	8	41,178
1969-70	12,352	5,466	5,456	5,659	9,667	242	16	5	38,865
1970-71	9,797	4,315	4,519	4,936	9,455	207	6	3	33,237
1971-72	10,348	4,784	5,100	5,629	9,271	172	18	3	35,324

(a) The classification of crops was revised in 1971-72 and adjustments made to statistics back to 1967-68. After 1966-67 lucerne for green feed, hay and seed, and pasture cut for hay are excluded.



### The Australian Agricultural Council

The influence of government and semi-government authorities on Australian rural industry is most apparent in the fields of guaranteed prices, subsidies and controlled marketing. Many of these aspects of intervention at the national level take place indirectly through the Australian Agricultural Council. This is a permanent organisation which was formed following a conference of Commonwealth and State Ministers on agricultural and marketing matters held at Canberra in December 1934. The Council consists of the Commonwealth Ministers for Primary Industry, Northern Development and the Northern Territory and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principal functions of the Council are: the promotion of the welfare and development of agricultural industries generally; the exchange of information on agricultural production and marketing; the improvement of the quality of agricultural products and the maintenance of high grade standards; to ensure, as far as possible, balance between production and available markets; and organised marketing.

A permanent Standing Committee on Agriculture was also formed to advise the Council on all the above matters, and in addition to bring about co-operation and co-ordination in agricultural research, to advise State and Commonwealth Governments on the initiation and development of agricultural research programs, and to secure co-operation between all Governments in respect of quarantine measures against pests and diseases of plants and animals.

The Standing Committee on Agriculture comprises the permanent heads of the State Departments of Agriculture, the Secretary, Department of Primary Industry, and a representative each from the Commonwealth Departments of the Treasury, Health, Overseas Trade, Northern Development, the Northern Territory, External Territories, and from the Commonwealth Scientific and Industrial Research Organization.

### Financial assistance to primary producers

Financial assistance to primary producers by the Commonwealth Government may be provided in a number of ways. *See also* pages 556 and 561, Chapter 18, Public Finance. Examples of these follow.

*The Rural Reconstruction Scheme* provides finance to the States to help restore to economic viability those farms and farmers with capacity to maintain viability in the longer term. The forms of assistance comprise:

*Debt reconstruction* to assist the farmer who, although having sound prospects of long term commercial viability, has used all his cash and credit resources and cannot meet his financial commitments; and

*Fruitgrowing Reconstruction Scheme* announced on 14 July 1972 provides \$4.6 million to assist horticulturists facing financial difficulties to remove surplus fruit trees. Growers eligible for assistance are those whose trees take at least 5 years to mature; have a commercial bearing life of at least 10 years; and produce fruit which are in a chronic state of over supply. The scheme applied initially to the canning peach, canning pear, fresh apple and fresh pear industries, but may be extended to other fruit trees which meet the above criteria. In March 1973 it was extended to include the canning apricot industry.

Two forms of assistance are offered:

*Clear fell* for the grower who is predominantly a horticulturist, who is in severe financial difficulties and intends to clear fell his orchard and leave the fruit growing industry.

*Partial fell* for the grower whose resources are inadequate to withstand the short term effects on his economic viability of removing trees without assistance; whose long term viability is threatened by the surplus of the horticultural commodity concerned; and who has sound long term prospects after removal of the surplus trees and taking into account other potential uses of the land.

The maximum rate of assistance is \$500 per acre for canning peaches and canning pears and \$350 per acre for fresh apples and fresh pears. The Scheme is administered, so that the average rate of assistance does not exceed \$350 per acre for canning fruit and \$250 per acre for fresh fruit.

A grower who receives assistance under the scheme must undertake not to plant within 5 years from the date of receipt of assistance any trees specified by the administering authority. The specified trees at present are the same as those in respect of which assistance

is provided under the Scheme. Applications for assistance close on 30 June 1973 and trees must be removed by 31 October 1973. At 9 March 1973, 433 applications had been received and 69 applications involving 950 acres of fruit trees had been approved.

*Farm build-up* to supplement the normal processes under which properties which are too small to be economic are amalgamated with an adjoining holding, or to assist a farmer with a property too small to be economic to purchase additional land to build up his property to at least economic size.

For those obliged to leave the industry limited assistance by way of a loan up to a maximum of \$3,000 is available where such assistance is necessary to alleviate conditions of personal hardship. In addition, such persons may be eligible for retraining under the Rural Reconstruction Employment Training Scheme.

Originally, \$100 million was to be made available to the States over a period of 4 years ending 30 June 1975. In addition the States were authorised to use \$9.5 million from the pre-war Farm Debt Adjustments Scheme for rural reconstruction purposes. However, following a review of the scheme in March/April 1972, the Commonwealth undertook to provide the whole \$100 million by 30 June 1973 and to provide \$15 million in 1973–74 to fund approvals given in the later months of 1972–73. Following the review of the scheme in March 1973, the Commonwealth agreed to provide a further \$36 million to finance new approvals in 1973–74. From the inception of the scheme until 28 February 1973, 12,621 applications for assistance had been received, 3,308 applications for debt reconstruction and 1,129 applications for farm build-up have been approved; and the value of assistance approved amounted to \$116.8 million.

*Five Year Dairy Industry Stabilisation Plan.* A new five year stabilisation plan providing for the continuation of financial assistance on butter and cheese production and an export bounty on processed milk products commenced on 1 July 1972. The amount of assistance on butter and cheese production will be determined annually in the light of the needs and circumstances of the industry but will not be less than \$27 million annually and for 1972–73 the level of assistance was set at \$27 million. The export bounty on processed milk products will continue at the maximum rate of \$800,000 annually for each of the five years of the plan. (Details of earlier plans have been given in previous year books.)

*Commitments to industry-financed stabilisation schemes.* In schemes of this nature the Commonwealth generally accepts a defined contingent liability to contribute to Government-approved stabilisation funds if growers' contributions prove inadequate. The contribution by the Commonwealth to the Wheat Prices Stabilisation Fund is an example.

Commonwealth payments are made to assist in control and eradication of diseases and pests by the various States and to provide natural disaster relief assistance, where these are beyond the financial capacity of the States.

For details of the Emergency Financial Assistance for Woolgrowers and the Wool Deficiency Payments Scheme see page 812. Details of the Marginal Dairy Farms Reconstruction Scheme are given on page 826.

### Agricultural research

Each State Department of Agriculture has a number of research stations, investigating problems mainly of the regions in which they are located. In addition, a substantial amount of research and investigational work is carried out by these departments on farmers' properties. The work is supported by central laboratory and service facilities in capital cities, and increasingly also by research, analytical and diagnostic laboratories in the country areas. Research results are passed on to farmers through field days, meetings and publications, and through extension staff of the State Departments of Agriculture. In recent years, there has been increasing interest in economic interpretation of research results.

The Commonwealth Scientific and Industrial Research Organization carries out research at field stations and laboratory facilities in many parts of Australia, and also undertakes developmental studies at national level. Its research programs in the agricultural and livestock fields are generally designed to give information which is widely applicable in the Australian environment, and which may require further regional interpretation and adaptation in order that it may be of use to the farming industries. The universities also carry out agricultural research at laboratory and field levels, in addition to their teaching functions.

For details of agricultural training see Chapter 19, Education, Cultural Activities and Research.



### Research schemes

The research activities of State Departments, the C.S.I.R.O., universities and other institutions, are supplemented by funds provided under a series of joint Commonwealth-industry research schemes. Statutory arrangements of this nature exist for tobacco, wool, wheat, dairying, meat, poultry (eggs), chicken meat, pigs, dried fruits and fish. Contributions to these research schemes are raised from the industry by way of a levy on the produce concerned, matched by Commonwealth funds.

For research work in industries where legislation-backed arrangements do not exist, voluntary contributions from the rural industry are matched by the Commonwealth from a Special Research Grant to finance a range of research projects e.g. fruit fly disinfestation, locust control, pest management, grape forecasting, etc.

### Extension services and market outlook information

Agricultural extension services are provided by the States through their Departments of Agriculture, and in certain special fields by other State departments and authorities. Extension services also operate in the Northern Territory, Australian Capital Territory and Papua New Guinea.

All State Departments of Agriculture have university or agricultural college trained officers located in country areas. They carry out advisory and educational activities in the farming community, through contact with individual farmers, and through group and general publicity channels. In recent years several States have placed agricultural economists in country areas, strengthening the economic and farm management content of extension.

Support for the field extension staff is provided by information service groups, by applied research teams and industry and subject matter specialist groups and by diagnostic and analytical services. Some States have advisory staff specialising in agricultural mechanisation, and one State has begun to place extension method specialists in country areas.

Information services operated by Departments of Agriculture include agricultural journals, periodicals in various industry fields, pamphlets, newsletters, films, radio talks and television presentations. Group activities include discussion groups, field days, demonstrations, evening meetings and displays.

Since 1948 the Commonwealth has provided unmatched grants to the States to assist them in expanding their extension activities. In 1966, a program of rapid expansion of this assistance beyond the existing provision of \$1.4 million per annum was undertaken, with \$21 million being made available during the subsequent five years. Provision for the five year period which began in 1971 amounts to \$37 million. The Commonwealth Extension Services Grant is used mainly by State Departments of Agriculture, and its scope includes extension, regional research, information, economic services and training.

Since 1971 the Bureau of Agricultural Economics has organised a series of annual National Agricultural Outlook Conferences to which representatives from industry bodies, marketing authorities, State and Commonwealth government departments, universities and other agricultural institutions are invited to analyse and discuss in depth the outlook for rural commodities.

Extension type services are available from non-government sources. Some commercial firms and co-operatives provide extension or advisory services primarily for their clients. Over the past decade a new profession of farm management consultants has emerged, providing fee or contract services ranging from property assessment or supervision to detailed farm management and development plans. Farmers' needs and interests were demonstrated by an initial phase of grouping themselves together in farm management clubs to employ their own advisors.

## Distribution, production and value of crops

### Distribution of crops

The wide range of climatic and soil conditions over the agricultural regions of Australia has resulted in a diversity of crops being grown throughout the Commonwealth. Generally, cereal crops (excluding rice and sorghum) are grown in all States over wide areas, while other crops are confined to specific locations in a few States.



## AREA OF CROPS: STATES AND TERRITORIES, 1971-72

(Acres)

Crop	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for grain—									
Wheat . . .	5,995,438	2,570,312	1,373,879	2,640,447	5,045,608	11,293	..	1,024	17,638,001
Barley—									
2-row . . .	647,861	707,946	355,182	1,886,713	1,409,323	28,128	..	..	5,035,153
6-row . . .	274,912	23,020	36,805	49,731	842,592	2,947	..	..	1,230,007
Oats . . .	645,598	814,154	50,848	417,237	1,121,573	15,893	..	250	3,065,553
Grain sorghum .	513,466	404	1,045,834	..	3,865	..	13,932	..	1,577,501
Maize . . .	82,145	927	110,076	..	71	..	..	..	193,219
Rye . . .	17,236	12,509	(a)	48,377	24,299	26	..	..	(b)102,447
Rice . . .	91,304	..	8,759	..	(a)	..	(a)	..	(b)100,063
Panicum and millet .	1,467	9,293	48,426	..	..	..	(a)	..	(b)59,186
Canary seed .	2,795	103	11,562	689	318	..	..	..	15,467
Legumes mainly for grain—									
Cow, field and poona peas .	18,722	14,981	12,423	35,570	4,158	3,569	(c)	..	(b)89,423
Soy beans . .	9,137	44	35,344	..	..	..	(c)	..	(b)44,525
Navy beans .	..	..	20,363	..	..	422	..	..	20,785
Other . . .	17,343	613	..	777	65,798	174	420	..	85,125
Crops for hay—									
Wheat . . .	75,591	28,876	5,313	38,014	50,015	1,024	..	90	198,923
Barley . . .	5,953	7,120	2,231	23,202	9,876	248	..	..	48,630
Oats . . .	77,047	179,598	15,741	130,342	171,742	4,583	..	370	579,423
Rye . . .	703	2,388	..	557	492	261	..	..	4,401
Other . . .	946	228	7,701	..	2,067	..	453	..	11,395
Crops for green feed or silage—									
Wheat . . .	43,539	2,964	21,934	3,840	13,294	495	..	..	86,066
Barley . . .	73,742	9,152	40,688	51,059	57,778	858	..	..	233,277
Oats . . .	530,341	76,677	471,934	139,324	258,971	26,429	..	547	1,504,223
Forage sorghum	67,280	2,482	197,340	..	6,023	20	..	..	273,145
Grain sorghum .	..	1,498	65,912	..	442	..	2,193	..	70,045
Maize . . .	8,774	1,991	6,885	..	509	117	..	..	18,276
Rye . . .	8,053	1,640	(c)	6,838	5,386	281	..	..	(b)22,198
Vegetables for animal feed .	48,489	39,358	12,734	4,003	1,607	10,238	165	..	116,594
Other . . .	23,129	4,513	80,970	4,449	12,462	16,212	223	169	142,127
Sugar cane—									
Cut for crushing	23,055	..	554,521	..	..	..	..	..	577,576
Cut for plants .	662	..	12,164	..	..	..	..	..	12,826
Other land under sugar cane .	18,330	..	77,514	..	..	..	..	..	95,844
Tobacco . . .	3,146	9,499	12,178	..	..	..	..	..	24,823
Peanuts . . .	561	..	82,744	..	(a)	..	100	..	(b)83,405
Cotton . . .	72,425	..	17,042	..	9,540	..	..	..	99,007
Sunflower . .	590,248	5,290	132,635	775	38	..	..	..	728,986
Rapeseed . . .	81,596	36,772	..	5,577	90,826	86	..	(a)	(b)214,857
Linseed . . .	23,206	9,127	4,626	424	11,845	..	..	..	49,228
Safflower . .	46,146	3,143	30,843	488	2,923	..	..	..	83,543
Fruit—									
Tree . . .	78,034	66,349	31,293	42,262	21,991	17,761	92	35	257,817
Small and berry	210	816	281	216	29	1,568	..	..	3,120
Other . . .	18,659	62	23,838	..	539	..	129	..	43,227
Grapevines . .	31,270	51,383	3,882	71,090	6,735	..	..	..	164,360
Vegetables . .	73,710	82,525	67,158	25,754	14,852	24,629	394	131	289,153
All other crops—									
Nurseries . .	1,863	2,727	685	418	331	119	(a)	8	(b)6,151
Hops . . .	..	975	..	..	(a)	1,367	..	..	(b)2,342
Broom millet .	1,117	91	67	..	(a)	..	..	..	(b)1,275
Other crops, n.e.i.	2,622	2,164	9,888	904	2,642	2,803	148	65	21,236
Total area of crops (excluding pastures) .	10,347,871	4,783,714	5,100,243	5,629,077	9,270,560	171,551	18,249	2,689	35,323,954
Area of above double-cropped .	5,591	3,507	117,271	540	1,095	6,904	57	18	134,983
Total area used for crops (excluding pastures) .	10,342,280	4,780,207	4,982,972	5,628,537	9,269,465	164,647	18,192	2,671	35,188,971
Pastures and grasses cut for hay .	555,467	1,354,388	109,658	414,040	202,582	194,475	3,435	1,780	2,835,825
Pastures and grasses harvested for seed	38,516	20,434	69,713	79,285	50,716	5,092	1,335	..	265,091
Total area used for crops (including pastures) .	10,936,263	6,155,029	5,162,313	6,121,862	9,522,763	364,214	22,962	4,451	38,289,887

(a) Not available for publication, included in 'Other crops, n.e.i.'. (b) Incomplete; see footnotes to individual States. (c) Not available separately, included in 'Other'.

## AREA OF CROPS: AUSTRALIA, 1967-68 TO 1971-72

('000 acres)

Crop	1967-68	1968-69	1969-70	1970-71	1971-72
Crops (excluding pastures)—					
Cereals for grain . . . . .	29,314	34,941	32,026	26,703	29,017
Legumes for grain . . . . .	64	72	103	110	240
Crops for hay . . . . .	1,240	1,058	1,058	863	843
Crops for green feed or silage . . . . .	3,637	3,292	3,792	3,449	2,466
Sugar cane . . . . .	675	685	680	682	686
Tobacco . . . . .	23	26	27	27	25
Peanuts . . . . .	62	79	83	95	83
Cotton . . . . .	77	81	77	87	99
Sunflower . . . . .	9	34	64	187	729
Rapeseed . . . . .	..	n.a.	12	106	215
Linseed . . . . .	54	71	122	103	49
Safflower . . . . .	105	46	27	68	84
Fruit . . . . .	311	310	309	305	304
Grapevines . . . . .	140	143	150	158	164
Vegetables . . . . .	280	298	295	265	289
All other crops . . . . .	33	41	40	31	31
Total . . . . .	36,024	41,178	38,865	33,237	35,324
Area of above double-cropped . . . . .	140	166	224	137	135
Total area used for crops (excluding pastures) . . . . .	35,884	41,012	38,641	33,101	35,189
Pastures and grasses cut for hay . . . . .	1,560	2,897	2,135	2,499	2,836
Pastures and grasses harvested for seed . . . . .	248	343	339	329	265
Total area used for crops (including pastures) . . . . .	37,692	44,252	41,114	35,929	38,290

## Production and yield per acre of crops

## PRODUCTION OF CROPS (EXCLUDING PASTURES), 1972

Crop	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for grain—									
Wheat . . . . . '000 tonnes	2,410	1,797	722	1,407	2,165	8	..	1	8,150
Barley—									
2-row . . . . . '000 bus	10,341	16,857	10,063	45,072	29,898	1,106	..	..	113,339
6-row . . . . . "	4,926	574	904	1,084	14,211	115	..	..	21,814
Oats . . . . . "	12,194	24,770	972	9,138	22,812	389	..	5	70,280
Grain sorghum . . . . . "	13,640	14	30,624	..	339	..	507	..	45,124
Maize . . . . . "	4,506	76	3,837	..	4	..	..	..	8,422
Rye . . . . . "	207	95	(a)	295	208	..	..	..	(b)805
Rice . . . . . "	12,121	..	588	..	(a)	..	(a)	..	(b)12,710
Panicum and millet . . . . . "	26	98	741	..	..	..	(c)	..	(b)866
Canary seed . . . . . "	14	1	133	6	2	..	..	..	156
Legumes mainly for grain—									
Cow, field and poona peas . . . . . tons	4,306	8,206	1,834	20,115	1,033	165	(a)	..	(b)35,660
Soy beans . . . . . "	11,427	11	21,660	..	..	..	(a)	..	(b)33,098
Navy beans . . . . . "	..	..	6,146	..	..	159	..	..	6,305
Crops for hay—									
Wheat . . . . . tons	82,874	45,404	6,446	59,909	64,416	2,077	..	90	261,216
Barley . . . . . "	7,489	9,606	2,886	29,990	11,407	555	..	..	61,933
Oats . . . . . "	97,529	296,652	26,201	201,138	247,933	9,522	..	231	879,206
Rye . . . . . "	827	4,813	..	710	733	611	..	..	7,694
Other . . . . . "	1,355	530	11,775	..	2,653	..	491	..	16,804
Sugar cane, cut for crushing . . . . . '000 tons	965	..	18,119	..	..	..	..	..	19,084
Tobacco . . . . . '000 lb	4,090	12,709	18,507	..	..	..	..	..	35,306
Peanuts . . . . . cwt	4,755	..	901,024	..	(a)	..	865	..	(b)906,664
Cotton . . . . . '000 lb	222,276	..	14,633	..	24,849	..	..	..	261,757
Sunflower . . . . . cwt	2,382,250	46,930	471,735	2,970	158	..	..	..	2,904,043
Rapeseed . . . . . "	333,289	248,216	..	35,806	457,460	247	..	(a)	(b)1,075,018
Linseed . . . . . tons	3,654	3,334	1,280	91	1,708	..	..	..	10,067
Safflower . . . . . bus	583,800	39,802	190,818	4,458	29,805	..	..	..	848,683
Grapes . . . . . tons	160,950	374,848	5,471	266,802	10,666	..	..	..	818,737
Hops . . . . . cwt	..	13,550	..	..	(a)	22,818	..	..	(b)36,368
Broom millet—									
Grain . . . . . bus	2,628	149	..	..	..	..	..	..	2,777
Fibre . . . . . cwt	6,632	417	169	..	(a)	..	..	..	(b)7,218

(a) Not available for publication.

(b) Incomplete; see footnotes to individual States.

## PRODUCTION OF CROPS (EXCLUDING PASTURES): AUSTRALIA, 1967-68 TO 1971-72

<i>Crop</i>		<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
<b>Cereals for grain—</b>						
Wheat . . . . .	'000 tonnes	7,547	14,804	10,546	7,890	8,510
<b>Barley—</b>						
2-row . . . . .	'000 bus	28,731	58,438	61,652	78,634	113,339
6-row . . . . .	„	8,067	14,149	13,249	25,016	21,814
Oats . . . . .	„	39,628	94,250	68,723	88,882	70,280
Grain sorghum . . . . .	„	10,582	10,820	20,114	47,673	45,124
Maize . . . . .	„	7,132	5,869	7,543	8,331	8,422
Rye . . . . .	„	380	597	417	814	805
Rice . . . . .	„	11,597	13,420	12,951	15,698	12,710
Panicum and millet . . . . .	„	780	701	1,266	2,127	866
Canary seed . . . . .	„	60	220	697	202	156
<b>Legumes mainly for grain—</b>						
Cow, field and poona peas . . . . .	tons	8,490	22,663	26,130	26,870	35,660
Soy beans . . . . .	„	873	1,712	4,948	8,792	33,098
Navy beans . . . . .	„	1,445	833	2,491	1,103	6,305
<b>Crops for hay—</b>						
Wheat . . . . .	tons	319,943	391,787	436,311	256,038	261,216
Barley . . . . .	„	47,379	71,181	71,427	67,658	61,933
Oats . . . . .	„	837,862	1,205,313	953,053	910,838	879,206
Rye . . . . .	„	10,181	15,804	13,815	13,360	7,694
Other . . . . .	„	10,825	16,584	15,068	5,822	16,804
Sugar cane, cut for crushing . . . . .	'000 tons	16,756	18,413	15,535	17,366	19,084
Tobacco . . . . .	'000 lb	24,721	34,072	37,553	37,761	35,306
Peanuts . . . . .	cwt	606,159	334,601	840,851	612,618	906,664
Cotton . . . . .	'000 lb	214,736	223,423	186,443	132,013	261,757
Sunflower . . . . .	cwt	35,461	122,986	260,794	1,160,364	2,904,043
Rapeseed . . . . .	„	..	n.a.	87,862	661,762	1,075,018
Linseed . . . . .	tons	10,482	19,496	36,093	30,318	10,067
Safflower . . . . .	bus	878,246	569,939	229,507	515,388	848,683
Grapes . . . . .	tons	628,523	544,669	745,661	540,700	818,737
Hops . . . . .	cwt	36,752	42,757	40,319	33,591	36,368
<b>Broom millet—</b>						
Grain . . . . .	bus	10,138	23,605	6,383	4,139	2,777
Fibre . . . . .	cwt	10,245	23,123	10,210	6,452	7,218



## YIELD PER ACRE OF CROPS (EXCLUDING PASTURES): AUSTRALIA, 1967-68 TO 1971-72

<i>Crop</i>		1967-68	1968-69	1969-70	1970-71	1971-72
Cereals for grain—						
Wheat . . . . .	tonnes	0.336	0.552	0.450	0.493	0.483
Barley—						
2-row . . . . .	bus	13.9	22.3	21.2	20.8	22.5
6-row . . . . .	„	15.0	20.4	15.6	21.6	17.7
Oats . . . . .	„	11.7	24.3	20.2	23.2	22.9
Grain sorghum . . . . .	„	22.9	20.9	22.7	34.9	28.6
Maize . . . . .	„	35.6	35.7	38.3	39.4	43.6
Rye . . . . .	„	4.5	6.2	4.9	8.1	7.9
Rice . . . . .	„	152.7	161.2	130.5	166.9	127.0
Panicum and millet . . . . .	„	15.2	10.0	13.3	17.5	14.6
Canary seed . . . . .	„	8.4	9.4	10.2	9.2	10.1
Legumes mainly for grain—						
Cow, field and poona peas . . . . .	tons	0.15	0.40	0.34	0.34	0.40
Soy beans . . . . .	„	0.34	0.33	0.40	0.49	0.74
Navy beans . . . . .	„	0.24	0.08	0.19	0.10	0.30
Crops for hay—						
Wheat . . . . .	tons	0.89	1.47	1.27	1.37	1.31
Barley . . . . .	„	0.81	1.30	1.20	1.17	1.27
Oats . . . . .	„	1.04	1.69	1.53	1.56	1.52
Rye . . . . .	„	1.21	1.77	1.70	1.87	1.75
Other . . . . .	„	1.34	1.07	0.68	0.24	1.48
Sugar cane, cut for crushing . . . . .	tons	30.30	32.39	29.54	31.87	33.04
Tobacco . . . . .	lb	1,076	1,323	1,408	1,402	1,422
Peanuts . . . . .	cwt	9.82	4.24	10.13	6.43	10.87
Cotton . . . . .	lb	2,793	2,744	2,414	1,524	2,910
Sunflower . . . . .	cwt	3.96	3.65	4.06	6.21	3.98
Rapeseed . . . . .	„	..	..	7.31	6.24	5.00
Linseed . . . . .	tons	0.19	0.28	0.30	0.29	0.20
Safflower . . . . .	bus	8.40	12.29	8.58	7.54	10.16
Grapes . . . . .	tons	4.49	3.81	4.96	3.43	4.92
Hops(a) . . . . .	cwt	16.50	18.67	18.57	17.23	16.99
Broom millet—						
Grain . . . . .	bus	n.a.	n.a.	n.a.	3.00	2.19
Fibre . . . . .	cwt	4.58	6.68	5.29	4.68	5.66

(a) Yield per bearing acre only.

**Value of crop production**

Further reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used may be found in the chapter Miscellaneous.

**GROSS VALUE OF PRINCIPAL CROP PRODUCTION, AUSTRALIA, 1967-68 TO 1971-72**  
(\\$'000)

<i>Particulars</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
<b>Crops for grain—</b>					
Wheat . . . . .	435,443	731,334	547,253	414,292	469,226
Barley . . . . .	42,222	70,531	65,982	110,789	121,368
Grain sorghum . . . . .	11,582	13,861	24,121	57,382	50,731
Oats . . . . .	34,205	58,763	33,351	54,283	37,396
Rice . . . . .	12,831	14,358	14,533	13,720	12,842
Sugarcane, cut for crushing . . . . .	135,714	156,008	148,054	173,300	207,388
Tobacco . . . . .	27,919	38,528	38,930	42,528	39,848
Peanuts . . . . .	6,136	3,152	8,985	7,998	11,765
Cotton . . . . .	19,675	20,753	18,979	14,015	24,688
Sunflower . . . . .	291	595	1,531	7,340	16,713
Rapeseed . . . . .	..	..	40	2,944	5,101
Linseed . . . . .	1,270	2,233	4,337	3,522	1,049
Safflower . . . . .	1,519	997	422	984	1,318
<b>Fruit (excluding grapes)—</b>					
Orchard (including edible tree nuts) . . . . .	124,768	133,658	154,428	163,220	149,690
Berry and small . . . . .	2,926	4,088	4,433	4,537	4,054
Other . . . . .	27,552	28,133	34,135	31,727	32,711
<b>Grapes—</b>					
Table . . . . .	5,855	5,161	7,092	6,412	7,223
Wine . . . . .	15,191	18,549	23,016	20,419	24,570
Dried vine . . . . .	26,704	20,891	28,604	19,533	33,374
<b>Vegetables</b> . . . . .	144,569	138,186	140,222	169,053	160,444
Lucerne cut for hay . . . . .	29,573	35,380	37,006	38,645	31,815
Pastures and grasses harvested for seed . . . . .	11,067	12,692	11,316	9,620	8,302

Values of crop production in the various States and Territories are shown for 1971-72 in the following table. In computing the net value of production, no deduction has been made for the cost of maintenance of farm buildings and fences, nor for the depreciation of farm plant.

**GROSS, LOCAL AND NET VALUES OF CROP PRODUCTION**  
**STATES AND TERRITORIES, 1971-72**  
(\\$'000)

<i>State or Territory</i>	<i>Gross production valued at principal markets</i>	<i>Marketing costs</i>	<i>Local value of production</i>	<i>Value of materials used in process of production</i>	<i>Net value of production (a)</i>
New South Wales . . . . .	404,527	86,757	317,770	(b)31,515	286,255
Victoria . . . . .	301,742	46,198	255,544	30,137	225,408
Queensland . . . . .	433,570	49,412	384,158	63,994	320,164
South Australia . . . . .	213,207	27,319	185,888	27,109	158,779
Western Australia . . . . .	215,998	35,315	180,683	36,012	144,670
Tasmania . . . . .	35,652	9,705	25,947	4,631	21,316
Northern Territory . . . . .	1,500	n.a.	1,500	n.a.	1,500
Australian Capital Territory . . . . .	401	35	366	17	348
<b>Australia</b> . . . . .	<b>1,606,597</b>	<b>254,741</b>	<b>1,351,856</b>	<b>193,415</b>	<b>1,158,440</b>

(a) No deduction has been made for depreciation and maintenance.

(b) No allowance has been made for costs of power, power kerosene, petrol and other oils.

**Wheat**

Wheat is grown on a large scale in all States except Tasmania, and is the most important crop in Australia in terms of area, production and exports. The present limits of the wheat belt have been established after considerable fluctuation over the last four decades. In January 1934 a Royal Commission was appointed to inquire into and report upon the economic condition of the growing, handling and marketing of wheat, and the manufacturing, distributing and selling of flour and bread. The Report of this Royal Commission provides an authoritative description of all aspects of the industry up to that time.

It should be noted that for the 1972-73 season, production of wheat was reported in metric units. The *standard unit of reporting is a tonne* and consequently, figures relating to production of wheat are expressed in tonnes in this section of the Year Book. Conversion of previous years series was made by using a factor of 1 tonne = 36.7437 bushels.

### Wheat marketing and research

Two of the aspects of government and semi-government assistance and control which have contributed to the development of the industry are the organisation of overseas marketing and of research.

As a large proportion of the Australian wheat crop is exported, the marketing of wheat plays an important part in the industry. The Australian Wheat Board was constituted in September 1939, under National Security (Wheat Acquisition) Regulations, to purchase, sell, or dispose of wheat or wheat products, and to manage and control all matters connected with the handling, storage, protection, shipment, etc. of wheat acquired, and such other matters as were necessary to give effect to the regulations. Details of the operations of the Australian Wheat Board and the Wheat Stabilization Board in licensing wheat grown during the seasons 1941-42 to 1948-49 will be found in Year Book No. 38, pages 940-1, and a detailed survey of legislation relating to stabilisation of the wheat industry, including controls exercised during the 1914-18 and 1939-45 Wars and legislation establishing the Wheat Industry Stabilization Plan in 1948, is given in the Appendix to Year Book No. 37, pages 1295-9.

The Wheat Industry Stabilization Board ceased to function on 31 December 1948, and under the *Wheat Industry Stabilization Act 1948* the Australian Wheat Board was reconstituted to administer the first stabilisation plan and was given powers similar to those held under the National Security Regulations. The new Board commenced to function on 18 December 1948. The Board has been continued in existence by the *Wheat Industry Stabilization Acts 1954, 1958, 1963-66 and 1968-70* for the purpose of administering the second, third, fourth and fifth five year stabilisation plans. Details of the more recent plans were published in Year Book No. 40, pages 841 and 842 (1947-48 to 1952-53 Plan), No. 44, page 861 (1953-54 to 1957-58), No. 48, pages 903 and 904 (1958-59 to 1962-63) and No. 54, pages 868 and 869 (1963-64 to 1967-68).

*Fifth Post-war Wheat Industry Stabilisation Plan.* Following negotiations during 1968, the fifth post-war Wheat Industry Stabilisation Plan was enacted by the Commonwealth and States towards the end of 1968. The new plan operates on very much the same lines as the previous ones. However, there are some important changes in detail in the main features of the plan which are set out below.

The plan was to operate for five years, commencing with the 1968-69 crop and ending with the marketing of the 1972-73 crop. However, the plan was subsequently extended to cover the 1973-74 crop. More detailed information is available in the publication: *The Wheat Industry, 1971-72 and 1972-73 (Preliminary)*, (10.35).

The *Wheat Export Charge Act 1968* repealed the *Wheat Export Charge Act 1963* and provided for an export charge on wheat and wheat products for the seasons 1968-69 to 1972-73 inclusive. The charge which may be levied is the excess of the average export return over the sum of the guaranteed price (*see below*) and five cents per bushel (\$1.84 per tonne) with a maximum charge of fifteen cents per bushel (\$5.51 per tonne). The ceiling on the Wheat Prices Stabilisation Fund, into which this charge is paid, has been raised from \$60 million to \$80 million. Any excess beyond this figure is returned to growers on a 'first in, first out' basis.

Payments from the Wheat Prices Stabilisation Fund will be paid to the Australian Wheat Board when required, for the purpose of building up the average export price for any season to the guaranteed price. When the average export realisations fall below the guaranteed price the deficiency is made up first by drawing upon the Stabilisation Fund in respect of up to 200 million bushels (5.44 million tonnes) of wheat from each crop. If the Fund is exhausted, the necessary deficiency payments will be made from the Commonwealth Government's Consolidated Revenue Fund. As the return from exports has been below the guaranteed price, there have been no collections of the wheat export charge since the 1956-57 No. 20 Pool when \$3,178,000 was collected. In fact, grower's money in the Fund was exhausted with the closure of the 1959-60 Pool, and since then the Commonwealth has been obliged to meet its commitment in respect of the export guarantee. Up to the payment on the 1971-72 Pool this has involved an amount totalling \$284 million.

The Commonwealth has guaranteed a price to growers applying to 200 million bushels (5.44 million tonnes) of wheat exported from each crop during the period of the plan. The guaranteed price is subject to adjustment in each year of the plan in accordance with changes in price of cash costs, rail freights and handling and storage charges. There will no longer be any adjustment for imputed costs such as interest on farmers' equity. The guaranteed price per tonne in the 1972-73 season is \$57.61 f.o.b. vessel, an increase of \$1.83 on that of the previous season. Following the extension of the fifth plan to cover the 1973-74 crop, the guaranteed price for that season has been set at \$58.79 per tonne.



The Australian Wheat Board is retained as the sole constituted authority for the marketing of wheat within Australia and for the marketing of wheat and flour for export from Australia for the period of the plan.

Amending legislation, with effect from December 1969, gave the Australian Wheat Board discretionary power to sell wheat in Australia for purposes other than human consumption at prices below that set for human consumption but not less than the equivalent of the guaranteed price.

The table below shows the home consumption prices of wheat by end usage, for the last five years.

**WHEAT PRICES: HOME CONSUMPTION PRICES(a)(b), 1968-69 TO 1972-73**  
(\$ per tonne)

Utilisation	1968-69	1969-70	1970-71	1971-72	1972-73
Human consumption	62.83	63.38	63.93	65.40	67.63
Manufacture of flour for industrial use		52.73	53.28	54.75	56.98
Stockfeed (basic)		55.12	56.95	58.79	67.63
Stockfeed (where purchaser undertakes to buy entire season's requirements from Wheat Board)		52.73	53.28	54.75	56.98

(a) Australian Wheat Board basic selling prices for f.a.q. bulk wheat, f.o.r. (ports) basis. (b) Includes a loading of \$0.37 per tonne in 1968-69, \$0.59 in 1969-70, \$0.55 in 1970-71, \$0.44 in 1971-72, and \$0.83 in 1972-73 to meet freight charges on wheat shipped to Tasmania.

### Wheat delivery quotas plan

In March 1969 the Australian Wheat Growers' Federation put forward proposals for the allotment of quotas on deliveries of wheat to the Australian Wheat Board. The Federation's proposals were mainly designed to bring marketable supplies of wheat more into line with available outlets, following the record 1968-69 harvest. The proposals became effective for the 1969-70 harvest. State governments have the responsibility, for Constitutional reasons, of implementing the quota plan within the States and each State has enacted the necessary enabling legislation. The period of operation of the legislation varies among the States.

Quotas are subject to annual review. Wheat in excess of a quota may be received from a grower if storage space is available but 'quota wheat' will receive preference as far as receipt and subsequent sale by the Australian Wheat Board is concerned.

State quotas effective for the 1970-71 to 1972-73 seasons and those proposed by the Federation and agreed to by all parties for 1973-74 are given in the table below.

**WHEAT DELIVERY QUOTAS, SEASONS 1970-71 TO 1973-74**  
('000 tonnes)

Quota	State	1970-71	1971-72	1972-73	1973-74
Basic	New South Wales	2,694	3,102	4,028	5,030
	Victoria	1,415	1,551	1,823	2,490
	Queensland	680	735	871	1,012
	South Australia	979	1,089	1,252	1,886
	Western Australia	2,259	2,068	2,585	3,065
	<i>Total</i>	<i>8,027</i>	<i>8,545</i>	<i>10,559</i>	<i>13,483</i>
Additional	New South Wales—				
	Prime hard	327	327	191	191
	Durum	..	54	54	54
	Queensland—				
	Prime hard	299	299	163	163
	South Australia—				
	Southern hard	..	..	109	109
	<i>Total</i>	<i>626</i>	<i>680</i>	<i>517</i>	<i>517</i>
	<b>Grand total</b>	<b>8,653</b>	<b>9,225</b>	<b>11,076</b>	<b>(a)14,000</b>

(a) In terms of '000 tonnes the national and State quotas are: New South Wales 5,275, Victoria 2,490, Queensland 1,175, South Australia 1,995, Western Australia 3,065, total 14,000. In addition, for 1973-74, provision has been made for a special pool quantity of 544,000 tonnes which will be available as determined by the Minister for Primary Industry, to any State that achieves deliveries in excess of its quota.

Deliveries made within the quotas established receive a first advance payment. This has been \$1.10 per bushel (\$40.42 per tonne) for f.a.q. bulk wheat, f.o.r. ports basis for a number of years. For 1973-74 in addition to \$1.10 there will be a special incentive first advance payment of 10 cents per bushel (\$3.67 per tonne). The quota plan also provides that wheat received which is declared by the Australian Wheat Board to have been sold and paid for within the season will be treated as quota wheat of the season and receive a first advance payment.

The States are responsible for determining the method of allocation of individual quotas within their respective boundaries. The bases of quota allocation vary from State to State, but in the main, quotas are based on a farm's average deliveries over a recent period.

### Wheat standards

A description of the F.A.Q. (fair average quality) standard of wheat is given in issues of the Year Book up to No. 53 (*see*, for example No. 53 page 902). However, over recent years there has been an extension of the system and Australian wheat is now marketed under eleven main different and distinct classifications. Each reflects the climatic and growing characteristics of its region of origin and also the particular characteristics of the varieties of wheat cultivated.

For each classification, samples of wheat are obtained each year and are mixed to give a representative sample of that grade. From these samples, which are representative of all the wheat of a particular classification grown in that region, standards for each grade are established and expressed, since the recording of wheat production in metric units in 1972-73, in kilograms per hectolitre. This standard is used as the basis for sales of each grade and varies from year to year and from State to State. Below is a table showing the standard weight of the main wheat varieties for the five years 1968-69 to 1972-73.

### AUSTRALIAN STANDARD WEIGHTS FOR PRINCIPAL GRADES, 1968-69 TO 1972-73

(Source: Australian Wheat Board)

(kilograms per hectolitre)

State and grade	1968-69	1969-70	1970-71	1971-72	1972-73
New South Wales—					
Prime hard . . . . .	76.1	77.7	78.6	78.3	78.0
Northern hard . . . . .	(a)77.8	78.0	78.6	79.6	81.5
South-Western F.A.Q. . . . .	79.0	78.6	77.4	78.3	80.5
Victoria—					
F.A.Q. . . . .	80.7	81.7	81.1	80.5	82.3
Queensland—					
Prime hard . . . . .	(b)81.5	80.5	79.6	78.6	80.2
Hard . . . . .	79.0	79.2	78.6	(c)	76.2
Southern prime hard . . . . .	79.8	(c)	(c)	79.2	(c)
Southern F.A.Q. . . . .	79.3	(c)	(c)	(c)	(c)
South Australia—					
Hard . . . . .	79.3	78.3	77.7	76.8	80.7
F.A.Q. . . . .	79.3	78.6	78.6	78.3	81.6
Western Australia—					
F.A.Q. . . . .	79.8	78.6	79.9	79.9	78.6

(a) Northern f.a.q. (b) Central f.a.q. (c) Not fixed.

The several F.A.Q. grades, while possessing some characteristics in common, vary in protein content, milling characteristics, and dough qualities, and all are distinct grades. Similarly, the prime hard, hard and soft grades are individual grades segregated on the basis of specific quality characteristics.

In a normal season Australia produces a full range of wheats for all purposes from high protein hard wheats to low protein soft wheats.

### Bulk handling and storage of wheat

A detailed description of the bulk handling system, including its advantages and disadvantages compared with other methods of handling, appears on pages 954-8 of Year Book No. 39.

Bulk handling is general and has been in operation in all States for a considerable time. The bodies concerned with the administration of bulk handling in the various States are: Grain Elevators Board of New South Wales, Victorian Grain Elevators Board, State Wheat Board (Queensland), South Australian Co-operative Bulk Handling Ltd, Co-operative Bulk Handling Ltd (Western Australia), and the Tasmanian Grain Elevators Board.

**WHEAT: TOTAL CAPACITY OF BULK HANDLING FACILITIES(a)  
STATES, 30 NOVEMBER 1968 TO 1972**

(Source: Bulk handling authorities in the various States. *see above*)

('000 tonnes)

State	1968	1969	1970	1971	1972
New South Wales . . . . .	5,034	5,786	6,368	5,763	5,823
Victoria(b) . . . . .	2,942	3,538	3,602	3,884	3,884
Queensland . . . . .	838	947	985	1,129	1,189
South Australia . . . . .	1,539	2,599	2,582	2,555	2,545
Western Australia . . . . .	4,345	2,280	5,525	5,851	5,898
Tasmania . . . . .	29	29	29	29	29
<b>Australia . . . . .</b>	<b>15,171</b>	<b>17,901</b>	<b>19,091</b>	<b>19,212</b>	<b>19,368</b>

(a) Includes terminals, sub-terminals, country installations, and temporary storage. (b) Includes storage in southern New South Wales operated by the Victorian Grain Elevators Board.

Particulars of the operation of the bulk handling and storage systems in each State are set out on pages 916 and 917 of Year Book No. 48.

### International Wheat Agreement

Details of the first and second International Wheat Agreements operative from 1 August 1949 to 31 July 1953, and from 1 August 1953 to 31 July 1956, respectively, were published in Year Book No. 42 (*see* pages 840-1) or previous issues. Details of the third, fourth and fifth International Wheat Agreements which covered the periods from 1 August 1956 to 31 July 1959, 1 August 1959 to 31 July 1962 and 1 August 1962 to 31 July 1968 were published in Year Books 43 (page 836), 48 (page 906) and 55 (page 836) respectively.

### International Grains Arrangement

In August 1967 agreement was reached on a new International Grains Arrangement to operate for a period of three years from 1 July 1968. Details of the Arrangement were published in Year Book No. 55 (*see* page 836).

A new three year International Wheat Agreement came into effect on 1 July 1971. Like the International Grains Arrangement it covers a Wheat Trade Convention and a Food Aid Convention. The Wheat Trade Convention differs markedly from its 1968 predecessor in that it does not establish any maximum or minimum price provisions.

### Research into the wheat industry

Details of research into the Wheat Industry were published in Year Book No. 55 and previous issues. To the end of June 1972, the Wheat Industry Research Council and the State Wheat Industry Research Committees had spent \$17,710,000 mainly through grants to the Commonwealth Scientific and Industrial Research Organization, State Departments of Agriculture, universities and Wheat Research Institutes.

### Wheat farms: number and classification by activity

Particulars of the number of farms growing twenty acres and upwards of wheat for grain during each of the years 1967-68 to 1971-72 are shown in the following table. A farm worked on the share system or as a partnership is included as one holding only.

**NUMBER OF FARMS GROWING TWENTY ACRES AND UPWARDS  
OF WHEAT FOR GRAIN: STATES AND A.C.T., 1967-68 TO 1971-72**

State or Territory	1967-68	1968-69	1969-70	1970-71	1971-72
New South Wales . . . . .	20,619	21,340	20,608	18,537	18,723
Victoria . . . . .	11,056	11,722	11,618	9,669	10,273
Queensland . . . . .	5,867	6,063	4,982	2,816	4,503
South Australia . . . . .	8,905	9,884	9,529	8,548	8,997
Western Australia . . . . .	8,746	8,964	8,922	8,677	8,559
Tasmania . . . . .	159	239	203	403	160
Australian Capital Territory . . . . .	20	27	16	9	8
<b>Australia . . . . .</b>	<b>55,372</b>	<b>58,239</b>	<b>55,878</b>	<b>48,659</b>	<b>51,223</b>



There is in Australia a widespread combination of wheat growing with other rural activities. This is illustrated, for all States and for Australia, in respect of the 1968-69 season, in a series of statistical bulletins *Classification of Rural Holdings by Size and Type of Activity*, 1968-69, Nos 1 to 7. These publications also contain details of numbers of rural holdings classified according to area of wheat for grain.

#### Varieties of wheat sown

The breeding of wheat suitable to local conditions has long been established in Australia. Farrer (1845-1905) did invaluable work in pioneering this field, and the results of his labour and the continued efforts of those who have followed him have proved of immense benefit to the industry. Their efforts have resulted in the development of disease-resistant varieties, better average yields, and a greater uniformity of sample, with which have accrued certain marketing advantages as well as an improvement in the quality of wheat grown. In 1968 the Australian Wheat Collection was established at Tamworth, New South Wales, to supply basic genetic material to Australian wheat breeders. Some 15,000 varieties are at present held in the collection.

The principal varieties of wheat sown and the percentage of each to the total area sown in the five main wheat-producing States of Australia in 1971-72 were as follows: New South Wales, Timgalen (16.3), Heron (15.8), Falcon (13.3); Victoria, Insignia (32.8), Olympic (19.3), Summit (14.6); Queensland, Mendox (27.5), Timgalen (19.7), Gamut (18.7); South Australia, Heron (32.3), Insignia (including Insignia 49) (14.9); and Western Australia, Gamenya (57.1), Falcon (13.4), Insignia (7.8). A detailed table of wheat varieties sown appears in the annual bulletin *The Wheat Industry*, 1971-72 and 1972-73 (*Preliminary*) (published in May 1973).

#### Wheat area, production and yield per acre

Prominent factors in the early development of the wheat industry were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress, but its subsequent recovery was assisted by the invention of mechanical appliances, the use of superphosphate as an aid to production, and the introduction of new and more suitable varieties of wheat for Australian conditions. The establishment of closer settlement schemes and the settling of returned soldiers and others on the land were additional factors in its expansion.

#### WHEAT FOR GRAIN: AREA AND PRODUCTION STATES AND AUSTRALIAN CAPITAL TERRITORY, 1968-69 TO 1972-73

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES)								
1968-69	9,962	3,984	1,789	3,748	7,295	17	4	26,799
1969-70	8,623	3,298	1,504	3,210	6,788	15	3	23,449
1970-71	5,475	1,879	825	1,983	5,835	11	1	16,009
1971-72	5,995	2,570	1,374	2,640	5,046	11	1	17,638
1972-73p	6,515	2,794	1,172	2,472	6,212	11	1	19,177
PRODUCTION ('000 TONNES)								
1968-69	5,855	2,469	1,143	2,263	3,060	11	2	14,804
1969-70	4,430	2,274	405	1,610	1,815	10	2	10,547
1970-71	3,010	1,004	120	790	2,957	8	1	7,896
1971-72	2,410	1,797	722	1,407	2,165	8	1	8,510
1972-73p	1,989	1,320	401	815	2,017	8	1	6,552

A graph showing the area sown to wheat for grain in Australia for the years 1900-01 to 1970-71 appears on plate 39, page 746 of Year Book No. 58, and a map showing the distribution of areas growing wheat for grain throughout Australia in 1962-63 appears on page 1013 of Year Book No. 50. Similar maps showing the distribution of wheat areas in 1924-25, 1938-39, 1947-48, and 1954-55 appeared respectively in Year Books No. 22, page 695, No. 34, page 451, No. 39, pages 977-8, and No. 43, page 833.

The size of the wheat harvest in Australia is determined largely by the nature of the season, resulting in considerable year-to-year fluctuations in production. The main wheat-producing States of Australia are New South Wales, Western Australia and Victoria. Tasmania imports wheat from the mainland to satisfy its needs, though it exports flour made from local wheat which is particularly suitable for biscuits. The production of wheat from 1940-41 is shown in Plate 40, page 765.

# WHEAT FOR GRAIN: AUSTRALIA 1940-41 TO 1972-73



PLATE 40

## Price of wheat

For details of prices paid for wheat by end usage, see the table on page 761.

The Wheat Board's monthly basic export selling prices for f.a.q. bulk wheat, f.o.b. basis, are shown below.

## MONTHLY EXPORT WHEAT PRICES(a): JULY 1968 TO JUNE 1973 (\$ per tonne)

Month	1968-69	1969-70	1970-71	1971-72	1972-73
July . . . . .	52.31	50.89	46.99	52.50	49.05
August . . . . .	52.31	50.11	47.40	51.53	51.17
September . . . . .	52.31	48.46	49.19	49.88	61.18
October . . . . .	52.27	48.46	50.94	48.92	71.52
November . . . . .	52.41	48.46	51.99	48.55	73.99
December . . . . .	52.41	48.46	52.27	48.13	83.09
January . . . . .	52.41	48.13	53.19	47.95	82.44
February . . . . .	52.41	48.13	52.87	47.95	72.52
March . . . . .	52.22	47.49	52.87	47.95	70.18
April . . . . .	51.90	46.99	52.68	48.73	70.23
May . . . . .	51.53	46.85	52.50	48.96	73.90
June . . . . .	50.75	47.03	52.31	48.69	83.13

(a) Australian Wheat Board average basis f.o.b. price quoted for f.a.q. bulk wheat. Much of the wheat exported is sold under contract for delivery over lengthy periods, and therefore, the prices shown do not necessarily reflect the prices received for all wheat shipped during the months shown.

*International Wheat Agreements, 1949-53 to 1962-68.* As indicated on page 763 full details of the five International Wheat Agreements covering the years 1949-53, 1953-56, 1956-59, 1959-62 and 1962-68 have been given in previous issues of the Year Book.

*International Grains Agreement.* In August 1967 agreement was reached on a new International Grains Arrangement to operate for a period of three years from 1 July 1968. The new arrangement consisted of two legal instruments, the Wheat Trade Convention and the Food Aid Convention. For further details see Year Book No. 57, page 758.

*International Wheat Agreement, 1971.* The new International Wheat Agreement came into force on 1 July 1971. It has a life of three years. The form of the 1967 International Grains Arrangement has been continued and the new Agreement comprises two separate legal instruments, namely the Wheat Trade Convention and the Food Aid Convention.

The new Wheat Trade Convention ensures that the machinery for consultation and co-operation on wheat marketing existing under earlier Agreements will be maintained. The administrative body, the International Wheat Council, continues in existence. The Convention provides for the continuation of the full reporting and recording of all commercial and concessional transactions in wheat and flour.

The 1971 Wheat Trade Convention differs in an important aspect from earlier agreements in that it contains no specific pricing provisions, but the agreement specifically provides that when prices and related rights and obligations are judged capable of successful negotiation, the International Wheat Council shall arrange a further conference with the objective of bringing them into effect. In addition, a newly established Advisory Sub-Committee on Market Conditions will keep the wheat market under continuous review. This Sub-Committee will report to the Executive Committee of the Council if it considers that a situation of market instability has arisen, or threatens to arise. The Executive Committee will then review the situation and try to find mutually acceptable solutions.

With the entry of U.S.S.R. and Brazil, which were not members of the 1967 International Grains Agreement, all major wheat trading nations except the People's Republic of China participate in the Wheat Trade Convention.

The new Food Aid Convention is basically unchanged from the previous arrangement. Under this Convention a number of developed countries, importers and exporters alike, will continue to provide developing countries with food aid in the form of grains or flour for human consumption. Australia's contribution will remain unchanged at 225,000 tonnes annually (8,267,000 bushels of wheat). Since the new convention has fewer members and total annual contributions have fallen from 4,259,000 tonnes to 3,974,000 tonnes, Australia's share has risen marginally to some 5.6 per cent.

Several minor changes have been incorporated in the new Food Aid Convention. A new clause provides that in exceptional cases, and on request, limited quantities of rice may be included in the program. Also, sales on credit terms of 20 years or more will be eligible to be counted against aid commitments provided that maximum use is made of the other eligible forms of aid such as grants and sales for non-transferable local currency.

#### Value of the wheat crop

The estimated gross value of the wheat crop in each State and in Australia during the season 1971-72 and the value per acre are shown below.

#### WHEAT FOR GRAIN: VALUE OF CROP(a), STATES, 1971-72

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(b)
Aggregate value	\$'000	130,264	100,001	39,724	78,739	120,044	415	469,226
Value per acre	\$	21.73	38.91	28.91	29.83	23.79	37.73	26.60

(a) Gross value of total crop, including wheat used for seed and for stock feed on farms. Also includes payment of \$27,538,000 by the Commonwealth Government. (b) Includes the Australian Capital Territory.

#### Production and disposal of wheat in Australia

In the following tables details are given of Australian Wheat Board transactions, production and disposal of wheat during each of the years ended 30 November 1969 to 1972, and preliminary estimates for 1972-73.

#### RECEIVALS OF WHEAT BY THE AUSTRALIAN WHEAT BOARD, 1968-69 TO 1972-73 (<sup>0</sup>000 tonnes)

State	Year ended 30 November				
	1968-69	1969-70	1970-71	1971-72	1972-73
New South Wales	5,357	3,966	2,555	2,008	1,446
Victoria	2,577	2,337	894	1,753	1,165
Queensland	1,056	326	90	666	325
South Australia	2,162	1,516	681	1,306	709
Western Australia	2,876	1,598	2,712	1,927	1,776
Tasmania	6	5	3	5	4
Total	14,033	9,747	6,935	7,665	5,426



Stocks of wheat (including flour in terms of wheat) held by the Australian Wheat Board in each State at 30 November for the years 1968 to 1972 are shown in the following table. These data relate to stocks held at mills, sidings, ports, and depots as recorded by the Australian Wheat Board.

### STOCKS OF WHEAT, AND FLOUR AS WHEAT, 1968 TO 1972

(Source: Australian Wheat Board)

('000 tonnes)

State	30 November				
	1968	1969	1970	1971	1972
New South Wales . . . . .	276.2	2,304.1	2,629.3	1,504.7	489.2
Victoria . . . . .	361.9	1,684.5	2,112.2	655.1	399.3
Queensland . . . . .	18.7	185.1	61.7	2.5	25.7
South Australia . . . . .	184.8	1,254.5	1,227.8	430.0	278.9
Western Australia . . . . .	560.1	1,816.1	1,175.0	798.6	244.7
Tasmania . . . . .	9.6	15.5	15.5	13.4	12.9
<b>Total . . . . .</b>	<b>1,411.3</b>	<b>7,259.8</b>	<b>7,221.5</b>	<b>3,404.3</b>	<b>1,450.7</b>

Particulars of the production and disposal of wheat during the years ended 30 November 1968 to 1972 are shown in the following table.

### PRODUCTION, DISPOSAL AND STOCKS OF WHEAT: AUSTRALIA, 1967-68 TO 1971-72

('000 tonnes)

	Year ended 30 November—				
	1968	1969	1970	1971	1972
Opening stocks (including flour as wheat)(a)					
(b) . . . . .	2,192	1,411	7,260	7,222	3,404
Production . . . . .	7,547	14,804	10,546	7,890	8,510
<b>Total available supplies . . . . .</b>	<b>9,739</b>	<b>16,215</b>	<b>17,806</b>	<b>15,112</b>	<b>11,914</b>
Exports—					
Wheat . . . . .	5,108	5,960	7,569	8,595	7,427
Flour(c) . . . . .	520	408	454	376	256
Breakfast foods and other products(b)(c)	27	52	60	79	76
Local consumption—					
Flour(b)(c) . . . . .	1,225	1,211	1,236	1,246	1,276
Breakfast foods and other products(b)(c)	65	46	38	38	38
Stock feed wheat sales(b) . . . . .	615	267	321	395	533
Seed . . . . .	667	591	389	444	544
Balance (including retained on farm for other than seed use) . . . . .	148	183	401	513	291
Closing stocks (including flour as wheat)(a)(b)	1,411	7,260	7,222	3,404	1,451
<b>Total disposals . . . . .</b>	<b>9,786</b>	<b>15,978</b>	<b>17,690</b>	<b>15,090</b>	<b>11,892</b>
Excess (+) or deficiency (—) of disposals in relation to total available supplies(d) . . . . .	+47	—237	—116	—22	—22

(a) Held at ports, depots, mills and sidings. (b) Source: Australian Wheat Board. (c) In terms of wheat. (d) Includes allowances for unrecorded movements in stocks, gain or loss in out-turn, etc., and in differences related to the timing of official export statistics.

The *Wheat Industry Stabilization Act* 1948 empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. These provisions have been continued in the subsequent legislation, with the exception that advances are now arranged through the Reserve Bank.

**AUSTRALIAN WHEAT BOARD: FINANCIAL OPERATIONS, 1967-68 TO 1971-72**  
(\$'000)

	67/68 <i>Pool</i>	68/69 <i>Pool</i>	69/70 <i>Pool(a)</i>	70/71 <i>Pool(a)</i>	71/72 <i>Pool(a)</i>
	(1967-68 <i>Harvest</i> )	(1968-69 <i>Harvest</i> )	(1969-70 <i>Harvest</i> )	(1970-71 <i>Harvest</i> )	(1971-72 <i>Harvest</i> )
Paid to growers . . . . .	321,719	546,475	319,741	321,607	371,703
Rail freight . . . . .	42,009	90,644	57,083	50,843	46,894
Expenses . . . . .	32,317	65,014	55,161	36,395	35,600
<b>Total payments . . . . .</b>	<b>396,045</b>	<b>702,133</b>	<b>431,985</b>	<b>408,845</b>	<b>454,197</b>
Value of sales delivered . . . . .	(b)353,793	(c)674,414	(d)405,225	(e)377,500	(f)414,743

(a) Incomplete. (b) Subject to an additional \$42,870,000 provided by the Commonwealth Government and payment of \$618,000 to Wheat Industry Research Fund. (c) Subject to an additional \$29,008,000 provided by the Commonwealth Government and payment of \$1,289,000 to Wheat Industry Research Fund. (d) Subject to an additional \$27,538,000 to be provided by the Commonwealth Government and payment of \$778,000 to Wheat Industry Research Fund. (e) Subject to an estimated additional \$32,058,000 to be provided by the Commonwealth Government and payment of \$713,000 to the Wheat Industry Research Fund. (f) Subject to an estimated additional \$40,132,000 to be provided by the Commonwealth Government and payment of \$678,000 to the Wheat Industry Research Fund.

Details of earlier pools will be found in previous issues of the Year Book.

#### Imports of wheat

Wheat and flour have been imported in substantial quantities on four occasions since 1900; in 1902-3 the wheat harvest was only 336,874 tonnes, and wheat and flour equivalent to 339,323 tonnes of wheat were imported. An equivalent of 198,102 tonnes was imported in 1914-15 to supplement the yield of 680,000 tonnes produced in that season. Drought conditions in the Eastern States in 1945 necessitated the importation of feed grains from the U.S.A. including 20,000 tonnes of wheat. Owing to drought conditions in 1957-58 supplies of high protein wheat were insufficient for local requirements and, as a result, 40,415 tonnes were imported from Canada in 1958. No wheat has since been imported.

#### Exports of wheat and flour

Statistics in the following three tables are for years ended 30 June and relate to the exports of *Australian produce* only.

**WHEAT AND FLOUR: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72**  
(\$'000 f.o.b.)

	1967-68	1968-69	1969-70	1970-71	1971-72
Wheat(a) . . . . .	342,767	258,334	337,570	433,000	418,529
Flour(b) . . . . .	25,303	23,822	23,011	21,374	15,091
<b>Total . . . . .</b>	<b>368,070</b>	<b>282,156</b>	<b>360,581</b>	<b>454,374</b>	<b>433,620</b>

(a) Includes both bulk and bagged. (b) White flour (plain and self-raising), sharps and wheatmeal for baking.

**WHEAT: EXPORTS TO VARIOUS COUNTRIES, AUSTRALIA, 1967-68 TO 1971-72(a)**  
(<sup>'000 tonnes</sup>)

<i>Country to which exported</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Arab Republic of Egypt . . . . .	..	..	..	1,275	1,801
Chile . . . . .	171	105	79	197	297
Germany (East) . . . . .	..	..	..	114	170
Germany, Federal Republic of . . . . .	6	..	15	23	273
Iraq . . . . .	197	..	56	436	192
Japan . . . . .	612	1,147	1,014	821	1,466
Korea, Republic of . . . . .	..	10	..	27	361
Kuwait . . . . .	69	68	82	103	104
Malaysia . . . . .	255	253	283	312	310
Peru . . . . .	83	154	150	157	155
U.S.S.R. . . . .	..	..	..	..	502
United Kingdom . . . . .	574	781	1,041	1,744	573
Other(b) . . . . .	4,531	2,373	4,166	3,879	2,255
<b>Total . . . . .</b>	<b>6,498</b>	<b>4,891</b>	<b>6,886</b>	<b>9,088</b>	<b>8,459</b>

(a) 1972-73 preliminary estimate 5,360,000 tonnes. (b) Includes particulars of shipments made 'for orders' which could not be classified to countries.

The following table shows the exports of flour to various countries for each of the years 1967-68 to 1971-72. The figures relate to exports of white flour (plain and self-raising), sharps and wheatmeal for baking.

**FLOUR(a): EXPORTS TO VARIOUS COUNTRIES, AUSTRALIA, 1967-68 TO 1971-72**  
(Tonnes)

<i>Country to which exported</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Burma . . . . .	..	..	10,031	..	8,940
Fiji . . . . .	30,604	32,045	31,412	33,632	33,948
Indonesia . . . . .	59,479	53,157	62,971	51,064	7,893
Libya . . . . .	940	7,700	10,506	13,575	11,243
Malawi . . . . .	9,511	5,865	8,127	10,895	11,756
Mauritius . . . . .	15,761	15,425	18,305	13,542	17,299
Oman . . . . .	5,119	5,341	5,634	4,727	6,204
Papua New Guinea . . . . .	16,151	16,472	18,478	21,407	19,524
Qatar . . . . .	4,053	4,024	5,185	5,876	7,126
Saudi Arabia . . . . .	15,588	13,625	7,188	10,570	9,530
Sri Lanka . . . . .	145,714	129,733	89,196	85,020	14,911
Union of Arab Emirates . . . . .	11,074	9,834	14,890	18,072	17,952
Other(b) . . . . .	55,098	50,849	40,979	32,487	30,182
<b>Total . . . . .</b>	<b>369,092</b>	<b>344,070</b>	<b>322,902</b>	<b>300,867</b>	<b>196,508</b>

(a) Plain white and self-raising flour, sharps and wheatmeal for baking. (b) Includes particulars of shipments made 'for orders' which could not be classified to countries.

**World area and production of wheat**

The figures in the following table of the world area and production of wheat by principal countries and by continents have been compiled from statistics published by the International Wheat Council. Harvests in the northern hemisphere occur in the first of the two years mentioned in each column heading, and in the southern hemisphere at the end of that year and the beginning of the next. Harvests of the northern hemisphere countries are thus combined with those of the southern hemisphere which immediately follow; e.g. in 1970-71 the Canadian harvest occurred from August to September 1970 and the Australian harvest from October 1970 to February 1971.



# WHEAT: AREA, PRODUCTION AND YIELD PER HECTARE IN VARIOUS COUNTRIES AND REGIONS(a), 1969-70 TO 1971-72

(Source for countries other than Australia: International Wheat Council—World Wheat Statistics)

Country and region	Area(b)			Production(c)			Yield per hectare		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
	'000 hectares	'000 hectares	'000 hectares	'000 tonnes	'000 tonnes	'000 tonnes	tonnes	tonnes	tonnes
Africa . . . . .	9,250	9,450	9,500	7,170	8,270	8,500	0.775	0.875	0.895
Asia—									
China, People's Republic of(d)	23,500	24,700	25,000	22,300	24,500	24,900	0.949	0.992	0.996
India . . . . .	15,958	16,626	17,892	18,651	20,093	23,247	1.169	1.209	1.299
Pakistan . . . . .	6,277	6,349	6,185	6,711	7,399	6,616	1.069	1.165	1.070
Turkey(e) . . . . .	8,250	8,600	8,680	10,500	10,000	13,250	1.273	1.163	1.526
Total Asia(a) . . . . .	65,600	67,300	68,300	69,720	72,270	75,900	1.063	1.074	1.111
Europe—									
France . . . . .	4,034	3,746	3,977	14,459	12,922	15,360	3.584	3.450	3.862
Germany, Federal Republic of(e)	1,494	1,493	1,544	6,000	5,662	7,142	4.016	3.792	4.626
Italy . . . . .	4,218	4,138	3,952	9,585	9,689	10,070	2.272	2.341	2.548
Spain(e) . . . . .	3,744	3,756	3,658	4,622	4,062	5,384	1.235	1.081	1.472
Total Europe(a) . . . . .	28,170	27,265	28,373	70,829	66,877	80,860	2.514	2.453	2.850
North and Central America—									
Canada . . . . .	10,104	5,052	7,781	18,623	9,022	14,253	1.843	1.786	1.832
United States . . . . .	19,254	17,863	19,608	39,740	37,291	44,620	2.064	2.088	2.276
Total North and Central America(a) . . . . .	30,130	23,635	27,990	60,570	48,500	60,590	2.010	2.052	2.165
Oceania—									
Australia . . . . .	9,486	6,479	7,261	10,547	7,890	8,380	1.112	1.218	1.154
Total Oceania(a) . . . . .	9,594	6,575	7,382	10,834	8,214	8,761	1.129	1.249	1.187
South America—									
Argentina . . . . .	5,191	3,332	..	7,020	4,920	5,100	1.352	1.477	..
Total South America(a) . . . . .	7,840	6,520	7,480	10,205	8,720	9,250	1.302	1.337	1.237
U.S.S.R. (Europe and Asia) . . . . .	66,426	65,200	64,035	79,917	99,664	99,700	1.208	1.529	1.557
World total(a) . . . . .	217,010	205,945	213,060	309,245	312,515	343,561	1.425	1.517	1.613

(a) Totals include estimates for countries not listed.  
bushels. (d) Unofficial. (e) Includes spelt.

(b) One acre = 0.404686 hectares.

(c) One tonne = 36.7437

## Principal wheat exporting and importing countries

The following table shows world exports of wheat and wheat flour (in terms of wheat) by the major wheat exporting countries, according to continents and countries of primary destination, based on statistics recently published by the International Wheat Council. While Australia's production of wheat has averaged about three per cent of the world's total during recent years, its exports account for a much higher proportion of the total quantities shipped. For the three years ended 1971-72 Australia's share of the world wheat exports has averaged 16 per cent.

**WORLD EXPORTS OF WHEAT, AND WHEAT FLOUR IN TERMS OF WHEAT  
1967-68 TO 1971-72**

*(Source: International Wheat Council—Review of the World Wheat Situation)  
(’000 tonnes)*

Year and country of primary destination	Exporting country							Total
	Argentina	Australia	Canada	E.E.C.	U.S.A.	U.S.S.R.	Other	
1971-72p—								
Africa—								
Arab Republic of Egypt .	..	1,860	64	599	5	44	185	2,757
Other . . . . .	63	484	598	1,128	1,906	94	33	4,306
Total Africa . . . .	63	2,344	662	1,727	1,911	138	218	7,063
Asia(b)—								
China, People's Republic of . . . . .	..	..	2,967	..	..	..	..	2,967
Iran . . . . .	..	432	..	2	588	..	22	1,044
Iraq . . . . .	..	180	44	7	..	55	..	286
Indonesia . . . . .	..	116	38	117	182	..	3	456
Japan . . . . .	..	1,454	1,388	..	2,195	..	..	5,037
Korea, Republic of . .	..	334	..	3	1,754	..	5	2,096
Kuwait . . . . .	..	124	..	10	..	..	..	134
Lebanon . . . . .	..	117	10	72	153	34	8	394
Malaysia . . . . .	..	323	14	..	..	..	3	340
Saudi Arabia . . . . .	..	131	5	67	138	..	..	341
Singapore . . . . .	..	137	13	..	9	..	..	159
Other . . . . .	14	657	1,455	867	4,474	532	747	8,746
Total Asia . . . . .	14	4,005	5,934	1,145	9,493	621	788	22,000
Europe(b)—								
Norway . . . . .	..	110	52	10	87	..	97	356
United Kingdom . . .	..	513	1,429	624	694	391	183	3,834
Germany (East) . . .	..	443	..	..	..	1,522	..	1,965
Other . . . . .	367	65	1,533	933	1,438	2,475	107	6,918
Total Europe . . . .	367	1,131	3,014	1,567	2,219	4,388	387	13,073
North and Central America	..	3	747	142	964	237	1	2,094
Oceania . . . . .	..	146	4	30	2	..	..	182
South America—								
Chile . . . . .	155	325	..	11	7	53	..	551
Peru . . . . .	..	156	174	..	458	..	..	788
Other . . . . .	724	48	333	8	1,853	41	70	3,077
Total South America .	879	529	507	19	2,318	94	70	4,416
U.S.S.R. . . . .	..	502	2,821	18	..	..	68	3,409
All other . . . . .	..	..	27	8	..	..	11	46
Total, 1971-72 . . .	1,323	8,660	13,716	4,656	16,907	5,478	1,543	52,283
1967-68 . . . . .	1,400	7,000	8,900	4,400	20,200	5,100	3,800	50,800
1968-69(a) . . . . .	2,800	5,400	8,700	5,000	14,700	5,400	3,000	45,000
1969-70 . . . . .	2,100	7,300	9,000	7,200	16,500	5,900	2,300	50,300
1970-71 . . . . .	1,700	9,500	11,600	3,100	19,800	7,100	1,000	53,700

(a) Years prior to 1968-69 include European Economic Community intratrade. (b) Excludes U.S.S.R., details of which are shown separately.

The above particulars are based on customs clearances of the exporting countries, and relate to years ended 30 June. There are small differences between Australian exports as shown and those on pages 768-9 due in part to the use by the International Wheat Council of a slightly different factor to convert flour to wheat equivalent.

## Oats

Oats is traditionally a cereal of moist temperate regions. However improved varieties and management practices have enabled oats to be grown over a wide range of soil and climatic conditions. It has excellent feed value and produces a greater bulk of growth than other winter cereals. It needs less cultivation than other winter cereals and responds to superphosphate and nitrogen in districts where it is usual to apply fertilisers. Oats has a variety of uses—as a pasture plant when rough sown into stubble or heavy clover pastures, as a fodder crop when mown and baled or cut for chaff, or as a grain when stripped (the stubble then being grazed off). The grain is sold through voluntary pools in Victoria, South Australia and Western Australia. In 1971 State statutory marketing boards were set up in New South Wales and Victoria after a poll of growers. The Victorian board was disbanded in 1972 and marketing reverted to a voluntary pooling arrangement. In the same year legislation to constitute a board was passed in South Australia. It has not yet commenced to operate. In Western Australia the grain is sold through a voluntary pool.

**Oats area, production and yield per acre**

Oats is usually next in importance to wheat among the grain crops cultivated in Australia. However, while wheat grown for grain in 1971-72 accounted for 61 per cent of the area of all crops, oats grown for grain represented only 11 per cent.

**OATS FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND AUSTRALIAN CAPITAL TERRITORY, 1967-68 TO 1971-72**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
AREA ('000 ACRES)								
1967-68	907	723	31	525	1,158	35	1	3,380
1968-69	1,185	991	55	516	1,092	31	1	3,872
1969-70	903	884	75	372	1,139	22	1	3,396
1970-71	1,002	987	60	482	1,284	23	1	3,838
1971-72	646	814	51	417	1,122	16	..	3,066

	PRODUCTION ('000 BUSHEL)(a)							
1967-68	8,235	6,859	450	3,299	19,759	1,014	12	39,628
1968-69	27,454	30,230	1,119	11,895	22,942	583	27	94,250
1969-70	19,238	25,927	950	6,665	15,463	455	25	68,723
1970-71	25,133	25,720	464	8,408	28,657	486	14	88,882
1971-72	12,194	24,770	972	9,138	22,812	389	5	70,280

	YIELD PER ACRE (BUSHEL)(a)							
1967-68	9.1	9.5	14.6	6.3	17.1	28.7	20.3	11.7
1968-69	23.2	30.5	20.3	23.1	21.0	18.5	22.4	24.3
1969-70	21.3	29.3	12.6	17.9	13.6	20.5	28.1	20.2
1970-71	25.1	26.1	7.7	17.5	22.3	20.8	23.7	23.2
1971-72	18.9	30.4	19.1	21.9	20.3	24.5	19.0	22.9

(a) 40 lb per bushel.

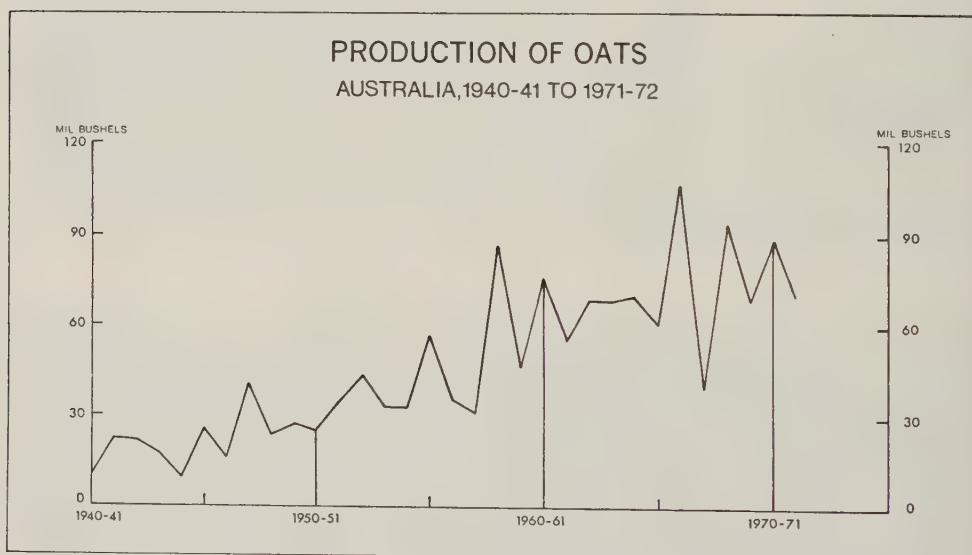


PLATE 41



Graphs showing the area sown to oats and production of oats in Australia appear on pages 993 and 995 of Year Book No. 49, and a map showing the distribution of areas growing oats for grain throughout Australia in 1962-63 appears on page 1015 of Year Book No. 50. The area sown to oats from 1900-01 to 1970-71 is shown in Year Book No. 58, Plate 39, page 746.

The production of oats from 1940-41 to 1971-72 is shown in plate 41, page 772.

Production of oats in 1971-72, 70,280,000 bushels was 35 per cent below the record production in 1966-67. Yield per acre was 22.9 bushels, which is below the record yield per acre of 25.2 bushels in 1966-67.

#### Value of oat crop

The average wholesale price in the Melbourne market for oats of good milling quality was \$0.73 per bushel in 1971-72, compared with \$0.64 in 1970-71. The estimated gross value of the oat crop in each State for the 1971-72 season and the value per acre were as follows.

#### OATS FOR GRAIN: VALUE OF CROP, STATES, 1971-72

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(a)</i>
Aggregate value	\$'000	8,780	11,334	1,215	5,496	10,256	304	37,391
Value per acre	\$	13.60	13.92	23.89	13.17	9.14	19.13	12.20

(a) Includes the Australian Capital Territory.

#### Exports of oats

#### OATS: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72

		1967-68	1968-69	1969-70	1970-71	1971-72
Quantity	'000 bus	10,033	18,373	12,086	30,640	18,132
Value	\$'000 f.o.b.	8,408	13,042	7,559	23,827	12,425

In 1971-72 the principal countries of destination were Japan (12,581,000 bushels), Italy (1,561,000 bushels), the Federal Republic of Germany (1,647,000 bushels) and the Netherlands (1,620,000 bushels).

#### World production of oats

The world production of oats for the year 1972, according to preliminary figures issued by the United States Department of Agriculture, amounted to 2,706 million bushels, harvested from 74.2 million acres, resulting in an average yield of 36.1 bushels an acre. This compared with an estimated production in the previous year of 3,015 million bushels from an area of 74.9 million acres and an average yield of 40.3 bushels an acre. The main producers are Canada, West Germany and Poland, with Australia producing about 3 per cent of the world total. On occasions in recent years Australia has been the world's largest exporter.

### Barley

This cereal contains two main groups of varieties, 2-row and 6-row. The former is generally, but not exclusively, preferred for malting purposes. Barley is grown principally on pasture land worked up early in the year of sowing. In this way it forms an important phase in the rotation of crops. Like oats, it may also be sown for fodder production or for grain. When sown for fodder, sowing may take place either early or late in the season, as it has a short growing period. It may thus provide grazing or fodder supplies when other sources are not available. Barley grain may be crushed to meal for stock or sold for malting.

Crops sown for malting purposes require a combination of light textured soil of moderate fertility, reliable rainfall, and mild weather during ripening. The main barley-growing areas in Australia are situated in South Australia (South Adelaide Plains, Eyre and Yorke Peninsulas), but considerable quantities are grown also in New South Wales, Victoria, Queensland and Western Australia. There are State statutory marketing boards operating in all mainland States.

### Barley Boards

The bulk of the barley crop in the various States is acquired and marketed by grower-controlled boards. Pooled returns from sales are distributed to growers at standard rates for the individual grades and varieties delivered. The Victorian and South Australian crops are marketed by the Australian Barley Board (a joint board established by the two State Governments), and the Queensland and Western Australian Barley Boards handle the crops of their respective States. A marketing board was established in New South Wales in 1971 after a poll of growers. Particulars of the proportion of barley production which was received by the Australian Barley Board (for Victoria and South Australia), together with details of quantity sold, advances and total payments to growers, are presented below.

#### AUSTRALIAN BARLEY BOARD: BARLEY RECEIVED, SOLD, ETC. 1967-68 TO 1971-72

Pool		Quantity received	Quantity sold(a)	Total advances per bushel(b)	Net payments to growers
		'000 bushels	'000 bushels	\$	\$'000
No. 29 (1967-68 Crop)	. . .	7,985	7,975	1.1912	7,511
„ 30 (1968-69 „ )	. . .	27,280	27,218	0.9681	21,765
„ 31 (1969-70 „ )	. . .	31,429	31,381	0.8490	21,191
„ 32 (1970-71 „ )	. . .	36,499	36,422	1.1010	34,551
„ 33 (1971-72 „ )	. . .	50,045	49,573	0.9100	(c)35,592

(a) Includes surplus or shortage in out-turn except for No. 33 Pool for which the sales are not yet complete. (b) 2-row No. 1 Grade (bulk) less freight. (c) As at 28 February 1973. At that date it was estimated that the amount still to be paid to growers was 5 cents per bushel.

### Barley area, production and yield per acre

Since the imposition of wheat quotas for the 1969-70 season, the area of barley sown for grain has increased substantially. The area sown in 1971-72 was 6,265,000 acres, which was 27 per cent more than the previous record acreage of 4,942,000 acres in 1970-71. The production of barley for grain in 1971-72, 135,153,000 bushels, was a record and was 30 per cent more than the previous record production of 103,650,000 bushels in 1970-71. The area, production and yield per acre of barley for grain in the several States for the years 1967-68 to 1971-72 are shown in the following table. Separate details for 2-row and 6-row varieties are shown for all States for 1971-72.

#### BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE STATES AND AUSTRALIAN CAPITAL TERRITORY, 1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES)								
1967-68 . . .	367	305	342	1,157	416	24	..	2,611
1968-69 . . .	486	409	427	1,412	553	26	..	3,314
1969-70 . . .	542	487	417	1,384	900	30	..	3,759
1970-71 . . .	744	665	226	1,714	1,562	32	..	4,942
1971-72—								
2-row . . .	648	708	355	1,887	1,409	28	..	5,035
6-row . . .	275	23	37	50	843	3	..	1,230
Total . . .	923	731	392	1,936	2,252	31	..	6,265

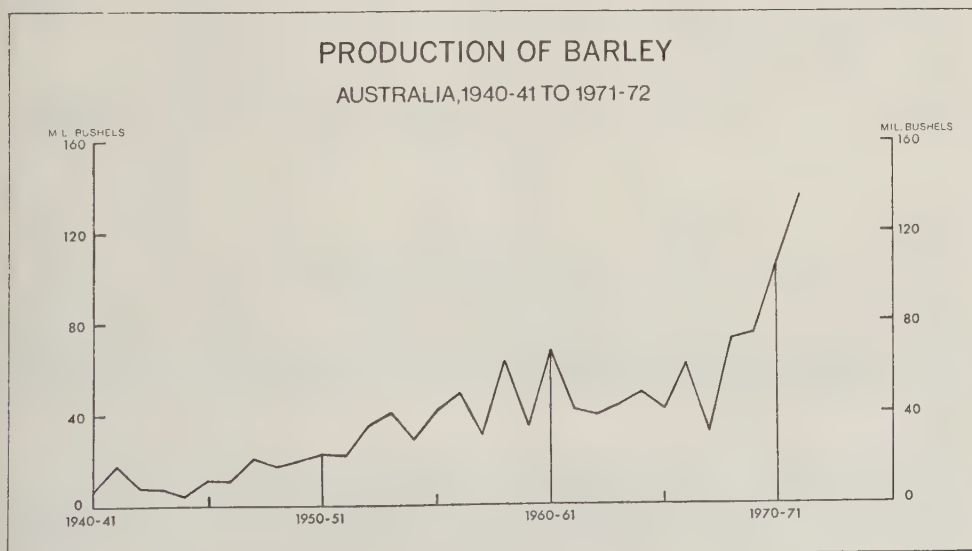
BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE, STATES  
AND AUSTRALIAN CAPITAL TERRITORY, 1967-68 TO 1971-72—*continued*

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
PRODUCTION ('000 BUSHEL)(a)								
1967-68	4,834	2,709	8,965	12,380	7,027	884	..	36,798
1968-69	11,212	8,885	12,869	29,551	9,187	884	..	72,588
1969-70	12,335	11,373	7,587	30,454	12,058	1,095	..	74,901
1970-71	18,937	14,038	2,704	32,738	33,922	1,312	..	103,650
1971-72—								
2-row	10,344	16,857	10,063	45,072	29,898	1,106	..	113,339
6-row	4,926	574	904	1,084	14,211	115	..	21,814
Total	15,269	17,431	10,966	46,156	44,109	1,221	..	135,153

YIELD PER ACRE (BUSHEL)(a)								
1967-68	13.2	8.9	26.2	10.7	16.9	36.8	..	14.1
1968-69	23.1	21.7	30.1	20.9	16.6	33.7	..	21.9
1969-70	22.8	23.4	18.2	22.0	13.4	36.9	..	19.9
1970-71	25.4	21.1	12.0	19.1	21.7	41.2	..	21.0
1971-72—								
2-row	16.0	23.8	28.3	23.9	21.2	39.3	..	22.5
6-row	17.9	24.9	24.5	21.8	16.9	38.9	..	17.7
Total	16.5	23.8	28.0	23.8	19.6	39.3	..	21.6

(a) 50 lb per bushel.

For Australia, 80 per cent of the area of barley for grain in 1971-72 was sown with 2-row barley. The proportion, however, varied considerably in the several States. The utilisation of barley during the season ended November 1972 was as follows: exports, 76,991,000 bushels; pearl barley, 140,000 bushels; seed 9,000,000 bushels.





The production of barley in Australia since 1940-41 is shown in plate 42, above and a map showing the distribution of barley growing areas throughout Australia in 1962-63 appears on page 1014 of Year Book No. 50. The area sown to barley from 1900-01 to 1970-71 is shown in plate 39, page 746 of Year Book No. 58.

#### Value of barley crop

The average wholesale price for 2-row English malting barley in the Melbourne market was \$1.46 per bushel in 1971-72 compared with \$1.43 in 1970-71. The estimated gross value of the barley crop in each State for the 1971-72 season and the value per acre are shown in the following table.

**BARLEY FOR GRAIN: VALUE OF CROP, STATES, 1971-72**

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Aggregate value	. \$'000	17,727	15,689	9,933	40,295	39,223	1,310	124,177
Value per acre	. \$	19.21	21.46	25.34	20.81	17.42	42.16	19.82

#### Exports of barley

South Australia is the principal exporting State, and Taiwan, Japan, the United Kingdom, the Republic of Korea and the Federal Republic of Germany were the principal countries to which barley was shipped in 1971-72. Particulars of exports of Australian-produced barley for the years 1967-68 to 1971-72 are shown in the following table.

**BARLEY: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72**

		<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Quantity	. . . '000 bus	5,701	19,871	27,880	49,515	80,463
Value	. . . \$'000 f.o.b.	6,569	18,246	22,766	50,820	74,344

In addition to exports of barley grain, there are also exports of Australian pearl and Scotch barley, the total for 1971-72 amounting to 455,000 lb, valued at \$14,000, the main countries of consignment being Papua New Guinea, Singapore and Mauritius.

#### Barley malt

Details of the recorded usage of barley and the production of barley malt in the years 1967-68 to 1971-72 are given in the following table.

**BARLEY MALT: GRAIN USED AND MALT PRODUCED, AUSTRALIA  
1967-68 TO 1971-72**

		<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Barley used	. . . '000 bus(a)	13,003	14,066	13,761	n.a.	n.a.
Malt produced	. . . '000 bus(b)	13,547	13,825	14,428	17,404	20,469

(a) 50 lb per bushel. (b) 40 lb per bushel.

Since 1952-53 the production of malt in Australia has been sufficient to meet local requirements and to provide a margin for export. Exports of Australian produce amounting to 8,216,000 bushels (value \$15,437,000) and 9,389,000 bushels (value \$19,193,000) were recorded in 1970-71 and 1971-72 respectively.

#### World production of barley

In comparison with the barley production of other countries that of Australia is extremely small. The main producers in 1972 were the Union of Soviet Socialist Republics, Canada, the United States of America, France and the United Kingdom. The People's Republic of China is also normally a major producer, but recent details are not available. Australian production in 1972 was approximately 2 per cent of the world total.

According to preliminary estimates made by the United States Department of Agriculture, world production of barley in the year 1972 amounted to 5,639 million bushels harvested from 187 million acres, equivalent to a yield per acre of 32.2 bushels. This compared with the production of 5,750 million bushels in the previous year from 178 million acres, giving a yield per acre of 32.2 bushels.

## Sorghum

The sorghums are summer growing crops which are used in three ways: grain sorghum for grain; sweet or fodder sorghum, sudan grass and more recently columbus grass for silage, green feed and grazing; and brook millet for brooms and brushware.

The growing of grain sorghum on an extensive scale did not attain a position of prominence until the last two decades. Operations are highly mechanised and, over the past three years, rapid increases in production have resulted in a substantial increase in exports. The grain is used primarily as stockfeed and is an important source for supplementing other coarse grains for this purpose.

The climatic conditions of Queensland and northern New South Wales are particularly suited to the growing of sorghums. In Queensland grain sorghum production is concentrated in the Burnett, Dawson-Callide areas and in the Central Highlands. In New South Wales the north-western slopes and the Murrumbidgee Irrigation Areas are the main areas. The crop is also being developed in north Queensland, in the Northern Territory, and in Western Australia.

In Queensland orderly marketing of the crop is arranged through the Central Queensland Grain Sorghum Marketing Board and the Grain Sorghum Export Committee of the Queensland Grain-growers Association. A State statutory marketing board commenced operations in New South Wales with the marketing of the 1972 crop.

GRAIN SORGHUM: AREA, PRODUCTION AND YIELD PER ACRE, STATES  
1967-68 TO 1971-72

Year	Area			Production(a)			Yield per acre(a)		
	N.S.W.	Qld	Aust.(b)	N.S.W.	Qld	Aust.(b)	N.S.W.	Qld	Aust.(b)
	acres	acres	acres	'000 bushels	'000 bushels	'000 bushels	bushels	bushels	bushels
1967-68	78,165	382,192	461,834	1,580	8,939	10,582	20.2	23.4	22.9
1968-69	136,945	371,234	518,164	3,927	6,789	10,820	28.7	18.3	20.9
1969-70	245,180	637,569	886,480	6,011	14,012	20,114	24.5	22.0	22.7
1970-71	445,692	911,118	1,364,474	17,876	29,614	47,673	40.1	32.5	34.9
1971-72	513,466	1,045,834	1,577,501	13,639	30,624	45,124	26.6	29.3	28.6

(a) 60 lb per bushel. Production in New South Wales and Queensland (for years prior to 1968-69) harvested from crop sown in previous year. (b) Includes small areas sown and quantities produced in other States and Territories. Excludes Northern Territory for 1967-68, 1968-69 and 1969-70.

## Maize

Like sorghum, maize is a summer cereal demanding specific soil and climatic conditions. For grain, growing is almost entirely confined to the south-east regions and Atherton Tablelands of Queensland and the north coast and northern tablelands of New South Wales. On the Atherton Tablelands in Queensland, and generally in New South Wales and Victoria, the cereal provides a stock feed for dairy cattle, fat stock, poultry and pigs. In times of drought it is used also as a sheep feed. In all States except South Australia, however, this crop is grown to some extent for green feed and silage, particularly in connection with the dairying industry. There is practically no difference between grain and fodder varieties.

There has been a continuing increase in recent years in the growing of maize from hybrid strains of seed. Varieties have been developed which are capable of producing yields per acre considerably in excess of the older open pollinated types. The expansion in areas sown to hybrid maize has led to a parallel development in the specialised industry of growing hybrid strains for seed.

A State statutory board controls marketing in the Atherton Tablelands area of Queensland. Elsewhere, marketing is in the hands of private merchants.

## Maize area, production and yield per acre

MAIZE FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND A.C.T., 1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
AREA (ACRES)								
1967-68	51,569	917	147,732	..	155	..	..	200,373
1968-69	54,484	1,161	108,679	..	39	..	..	164,363
1969-70	80,780	1,145	114,129	..	654	..	..	196,708
1970-71	82,318	1,322	127,815	..	153	..	..	211,608
1971-72	82,145	927	110,076	..	71	..	..	193,219

PRODUCTION ('000 BUSHEL)(a)								
1967-68	2,320	32	4,778	..	2	..	..	7,132
1968-69	3,083	72	2,713	..	1	..	..	5,869
1969-70	4,006	72	3,459	..	6	..	..	7,543
1970-71	4,191	62	4,076	..	2	..	..	8,331
1971-72	4,506	76	3,837	..	4	..	..	8,422

YIELD PER ACRE (BUSHEL)(a)								
1967-68	45.0	34.9	32.3	..	11.4	..	..	35.6
1968-69	56.6	62.2	25.0	..	17.0	..	..	35.7
1969-70	49.6	62.8	30.3	..	9.9	..	..	38.3
1970-71	50.9	47.0	31.9	..	10.2	..	..	39.4
1971-72	54.8	80.6	34.9	..	61.8	..	..	43.6

(a) 56 lb per bushel. Production in New South Wales and Queensland (for years prior to 1968-69) harvested from crop sown in previous year.

The average yield for Australia for the five-year period ended 1971-72 was 38.5 bushels per acre. Among principal producing countries, the United States of America averaged 96.9 bushels per acre and Brazil 20.6 bushels for 1972.

## Value of maize crop

The average wholesale price of maize in the Melbourne market in 1971-72 was \$2.81 per bushel compared with \$2.48 in 1970-71. The estimated gross value of the crop in each State for the 1971-72 season and the value per acre were as follows.

## MAIZE FOR GRAIN: VALUE OF CROP, STATES, 1971-72

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Aggregate value	\$'000	5,856	122	4,466	..	5	10,449
Value per acre	\$	71.29	131.61	40.57	..	70.42	54.01

## Exports of maize

## MAIZE: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
Quantity	'000 bus	101	7	27	881
Value	\$'000 f.o.b.	169	15	51	1,203



### World production of maize

According to figures issued by the United States Department of Agriculture, world production of maize in the year 1972 amounted to an estimated 11,181 million bushels, harvested from 264.4 million acres, giving an average yield per acre of 42.3 bushels. This compared with production in the previous year of 11,378 million bushels from 274.3 million acres, and an average yield of 41.5 bushels per acre.

The United States of America is the most important maize-producing country in the world, and during the four years ended 1970 the area sown to maize in that country averaged 57.1 million acres or 22 per cent of the world total. During the same period production averaged 4,449 million bushels or 45 per cent of the world total.

### Rice

The principal rice-growing areas of the world are confined almost entirely to Asia, although limited quantities are grown in other countries. In Australia rice was first cultivated at the Yanco Experimental Farm in New South Wales, but it was not grown commercially until 1924-25, when 16,240 bushels were produced from 153 acres. Favoured by high average yields and protected by tariff, rice culture made rapid progress in the Murrumbidgee Irrigation Areas until local requirements were met and a surplus became available for export. The acreage sown in this area is controlled, as the quantity of water available is limited.

Apart from small experimental areas in Western Australia and the Northern Territory, rice-growing in Australia is practically confined to the Murray and Murrumbidgee Irrigation Areas in New South Wales and recently, the Burdekin area of Queensland. In 1971-72, the largest purchasers of Australian rice were Papua New Guinea, Hong Kong and Chile. Details relating to area, production, and Australian-produced exports for the years 1967-68 to 1971-72 are shown in the following table.

**RICE: AREA, PRODUCTION AND EXPORTS, AUSTRALIA(a)**  
1967-68 TO 1971-72

Year		No. of holdings growing rice(b)	Area	Production (paddy rice)		Average yield (paddy) per acre	Imports	Exports
				Quantity	Gross value(c)			
			acres	'000 bushels (d)	\$'000	bushels (d)	'000 lb	'000 lb
1967-68	.	1,210	75,957	11,597	12,831	152.7	3,749	224,956
1968-69	.	1,464	83,267	13,420	14,358	161.2	3,225	245,202
1969-70	.	1,804	99,244	12,951	14,533	130.5	3,397	283,918
1970-71	.	1,880	94,033	15,698	13,720	166.9	966	225,830
1971-72	.	1,541	100,063	12,710	12,842	127.0	847	398,055

(a) For some years particulars of area and production for Western Australia and the Northern Territory are not available for publication, and are excluded. (b) Twenty acres or more in area. (c) Excludes the value of straw. (d) 42 lb per bushel.

### Fodder crops

#### Hay

As well as crops grown specifically for grain, considerable areas of Australia are devoted to fodder crops. These crops are utilised either for grazing (as green feed), or conserved as hay, ensilage, etc.

This development of fodder conservation as a means of supplementing pasture and natural sources of stockfeed is the result of the comparatively unreliable nature of rainfall in Australian agricultural and pastoral areas.

The following tables show statistics for hay, green feed, and silage produced.

**HAY: AREA, PRODUCTION AND YIELD PER ACRE, STATES AND TERRITORIES  
1967-68 TO 1971-72**

<i>Season</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>AREA ('000 ACRES)</b>									
1967-68 . . .	230	520	25	281	160	24	..	1	1,240
1968-69 . . .	286	327	37	241	149	16	..	2	1,058
1969-70 . . .	179	252	78	181	356	10	1	..	1,058
1970-71 . . .	116	197	41	209	287	10	1	..	863
1971-72 . . .	160	218	31	192	234	6	..	..	843
<b>PRODUCTION ('000 TONS)</b>									
1967-68 . . .	199	531	32	212	207	45	..	1	1,226
1968-69 . . .	441	598	52	371	205	31	1	2	1,701
1969-70 . . .	287	495	77	271	338	20	1	1	1,490
1970-71 . . .	182	349	26	280	395	21	..	1	1,254
1971-72 . . .	190	357	47	292	327	13	..	..	1,227
<b>YIELD PER ACRE (TONS)</b>									
1967-68 . . .	0.87	1.02	1.30	0.75	1.29	1.87	1.06	0.93	0.99
1968-69 . . .	1.54	1.83	1.40	1.54	1.38	1.91	3.10	1.29	1.61
1969-70 . . .	1.60	1.96	0.99	1.49	0.95	2.00	1.57	1.47	1.41
1970-71 . . .	1.57	1.77	0.63	1.34	1.22	2.00	0.24	1.29	1.45
1971-72 . . .	1.19	1.64	1.53	1.52	1.40	2.09	1.08	0.70	1.46

**HAY: AREA OF VARIOUS KINDS GROWN, STATES AND TERRITORIES  
1971-72  
(Acres)**

<i>State or Territory</i>	<i>Oats</i>	<i>Wheat</i>	<i>Other</i>	<i>Total</i>
New South Wales . . .	77,047	75,591	7,602	160,240
Victoria . . .	179,598	28,876	9,736	218,210
Queensland . . .	15,741	5,313	9,932	30,986
South Australia . . .	130,342	38,014	23,759	192,115
Western Australia . . .	171,742	50,015	12,435	234,192
Tasmania . . .	4,583	1,024	509	6,116
Northern Territory . . .	..	..	453	453
Australian Capital Territory . . .	370	90	..	460
<b>Australia . . .</b>	<b>579,423</b>	<b>198,923</b>	<b>64,426</b>	<b>842,772</b>

**HAY: VALUE OF CROPS, STATES 1971-72**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(a)</i>
Aggregate value . \$'000	25,940	41,832	9,549	10,651	13,294	5,778	(b)107,376
Value per acre . \$	36.24	26.60	67.89	17.57	30.44	28.80	29.19

(a) Includes Northern Territory and Australian Capital Territory.  
Northern Territory and Australian Capital Territory respectively.

(b) Includes \$204,000 and \$128,000 for the

## Farm stocks of hay

Particulars of stocks of hay held on farms at 31 March for the years 1968 to 1972 are given in the table below.

## STOCKS OF HAY HELD ON FARMS, STATES AND A.C.T., 1968 TO 1972

(Tons)

31 March—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
1968 . .	1,273,385	1,104,034	241,922	267,677	223,115	297,118	3,594	3,410,845
1969 . .	1,819,874	2,987,848	152,945	723,057	243,836	450,547	4,975	6,383,082
1970 . .	2,536,522	2,376,974	254,397	630,388	237,339	443,332	13,540	6,492,492
1971 . .	2,520,843	2,653,004	283,216	614,417	400,592	464,146	9,650	6,945,868
1972 . .	1,753,873	3,800,147	333,320	946,627	471,891	508,165	14,123	7,829,076

(a) Includes 930 tons in the Northern Territory.

Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for overseas trade, and consequently does not figure largely among Australian exports. During 1971-72 exports amounting to 12,674 tons, valued at \$503,000, were made, principally to Kuwait, Iran, Singapore and Japan. Imports of hay are not recorded separately, but are considered to be negligible.

## GREEN FEED OR SILAGE: AREA, STATES AND TERRITORIES, 1967-68 TO 1971-72

('000 acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68 .	1,104	419	1,206	391	409	106	..	1	3,637
1968-69 .	1,087	257	1,252	281	293	121	1	1	3,292
1969-70 .	1,268	241	1,502	296	376	106	1	1	3,792
1970-71 .	1,224	259	1,204	326	356	78	..	1	3,449
1971-72 .	803	140	898	210	356	55	3	1	2,466

## Silage

## SILAGE: PRODUCTION AND FARM STOCKS, STATES AND A.C.T.

1967-68 TO 1971-72

(Tons)

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
Production during—								
1967-68 season .	134,408	160,771	36,238	22,388	30,322	66,602	40	450,769
1968-69 " .	208,650	337,360	18,221	91,925	45,469	71,209	98	772,932
1969-70 " .	426,738	289,413	57,396	41,179	38,549	52,449	1,650	907,374
1970-71 " .	377,234	211,863	124,984	45,814	68,803	46,595	66	875,359
1971-72 " .	236,722	242,230	76,967	57,725	75,188	63,360	1,280	(a)754,722
Farm stocks at—								
31 March 1968 .	365,488	82,139	79,461	24,749	21,460	54,118	4	627,419
" " 1969 .	393,838	263,190	68,222	80,892	30,078	66,596	27	902,843
" " 1970 .	690,892	251,880	73,496	69,075	19,656	66,969	1,679	1,173,647
" " 1971 .	846,971	222,554	127,574	57,211	36,944	68,222	49	1,359,525
" " 1972 .	734,213	233,808	184,203	76,078	56,422	72,183	725	(b)1,358,212

(a) Includes 1,250 tons in the Northern Territory.

(b) Includes 580 tons in the Northern Territory.



## Sugar cane

The growing of sugar cane is restricted to those coastal areas in Queensland and northern New South Wales which have suitable climatic and soil conditions.

The Bureau of Sugar Experiment Stations in Queensland and the Colonial Sugar Refining Company Limited render useful service to the sugar industry by advocating and demonstrating better methods of cultivation and the more scientific use of fertilisers, lime, etc. and by producing and distributing improved varieties of cane. In common with these two organisations, Sugar Research Ltd, of Mackay, undertakes technological research in raw sugar milling practices.

### Sugar agreements and marketing arrangements in Australia

In Year Book No. 37, pages 940-1, a summary is given of the form of agreement which operates between the Commonwealth and Queensland Governments in respect of the sugar industry in Australia. Briefly, the agreement places an embargo on sugar importations and fixes the maximum wholesale price of sugar consumed in Australia. The current agreement, which replaced the 1962 agreement is for the period from 1 July 1969 to 30 June 1974 and prescribes maximum wholesale prices for sugar (delivered State capital cities, Launceston and Fremantle) approximately equivalent to a retail price of 10.5 cents per lb.

Production of sugar is regulated under the terms of the agreement. At the mill level control is exerted by means of seasonal 'mill peaks' in respect of Queensland mills and a proportionate allowance for New South Wales mills. The combined total equals the estimated requirements of the domestic and export markets. Farm production is regulated according to the limit on the mill which the farm supplies. Exports are limited by the export quota provisions of the International Sugar Agreement (*see below*).

The Queensland Government acquires the whole of the sugar production of that State and of New South Wales by legislation and private agreement respectively. The net proceeds of all sugar sold are pooled and uniform prices paid to mills. Production for 1972-73 is estimated to be 2,773,000 tons 94 net titre, of which New South Wales is expected to contribute approximately 101,000 tons.

### International Sugar Agreement

The International Sugar Agreement of 1937 was superseded by the International Sugar Agreements of 1953, 1958 and 1968. Details of the 1937, 1953 and 1958 Agreements were given in Year Books No. 40, pages 881-2, No. 48, page 936 and No. 54, page 892 respectively.

The 1968 International Sugar Agreement came into force on 1 January 1969, its term of operation being for five years from that date. Like its predecessors, the 1968 Agreement is built around a schedule of export quotas governing the net exports of exporting members to the world 'free' market. The Agreement is designed to maintain a balance between total world free market supply and demand by adjustments to the level of quotas in effect of exporting members. Quotas in effect cannot be adjusted downwards below 90 per cent of basic export tonnages except in exceptional circumstances where adjustments down to 85 per cent may be possible.

Quota adjustments under the Agreement must take account of the prices (meaning 'prevailing prices' as defined by the Agreement) ruling in the world free market. The quota adjustment provisions pivot around a world free market price of U.S. four cents per pound f.o.b. and stowed Caribbean port, in bulk. When the price is below U.S. four cents, the system is designed to provide an upward pressure on prices by quota reductions. When the price is above U.S. four cents, the system is designed to apply a downward pressure on prices by increases in the level of quotas in effect above basic export tonnages.

Under the Agreement, exporters are required to establish and maintain certain levels of minimum stocks which are only to be released to the market when the price rises above U.S. 4.75 cents. If the price rises above U.S. 5.25 cents, all quota restraints become inoperative, but if the price rises above U.S. 6.50 cents, exporters are required to supply their traditional importing members with certain historical quantities of sugar at prices not exceeding the commercial equivalent of U.S. 6.50 cents, subsequently raised to U.S. 6.95 cents owing to the U.S. currency devaluation.

If the price is below U.S. 3.50 cents, minimum export quotas in effect are to apply, while at prices below U.S. 3.25 cents, members are obliged to prohibit imports from non-member countries.

Australia has a basic export tonnage under this Agreement of 1,100,000 metric tons raw value (about 1,040,000 long tons of actual raw sugar) and is obliged to establish a minimum level of uncommitted stocks amounting to 15 per cent of this quantity. However, owing to the high world price of sugar and under the terms of the Agreement, all export quotas and other restrictions on

the export of sugar were suspended on 21 December 1971 and remained suspended throughout the whole year 1972. On 17 January 1972, for the same reasons, exporting member countries' minimum stocks were released for prompt sale and prompt shipment. In November 1972 the International Sugar Council decided not to allocate initial export quotas for 1973 or fix at that stage any other limitations on exports for 1973.

Australian exports of negotiated price sugar to the United Kingdom under the British Commonwealth Sugar Agreement, and to the U.S.A. market, are not controlled by the International Sugar Agreement.

In 1971, in accordance with the Agreement, member countries reviewed its operation. They made no change in basic export tonnages and price levels, but listed a number of points which would require consideration when the Agreement is renegotiated in 1973.

#### **British Commonwealth Sugar Agreement**

On 1 January 1953 the British Commonwealth Sugar Agreement became effective. A triennial review of the Agreement was held late in 1971, and in the expectation of the United Kingdom entering the European Economic Community, the negotiations were concluded on the understanding that the Agreement would terminate at the end of 1974. Under the Agreement Australia has a Negotiated Price Quota of 335,000 tons per annum to the United Kingdom. The negotiated price for Australian sugar had remained at £Stg. 43.10.0 per long ton f.o.b. and stowed, bulk sugar 96° polarisation, for the years 1966 to 1971. The price was increased to £Stg. 50 for 1972, 1973 and 1974.

The Agreement also allows Australia an adjusted Overall Agreement Quota (including the negotiated price quota) of 630,000 tons per annum, which can be adjusted from time to time as a result of re-allocations of other Commonwealth Sugar Agreement exporters. The balance of this quota over the negotiated price quota may be sold to preferential markets on the basis of the world market price plus preference, as part of Australia's export quota under the International Sugar Agreement.

#### **Exports to the United States of America**

Australian exports to the U.S.A. are governed by United States legislation at present covering the three years to the end of 1974. These exports are sold on the U.S. domestic raw sugar market, the supplies to which are regulated with a view to ensuring stable and equitable prices, independently of prices ruling elsewhere in the world.

Australian export entitlements to this market vary from year to year. In 1972 Australia's entitlement totalled 180,360 long tons of raw sugar and at 23 February 1972 our 1973 entitlement stood at 175,680 long tons raw value.

#### **Fruit Industry Sugar Concession Committee and sugar rebates**

The Fruit Industry Sugar Concession Committee was established by agreement between the Commonwealth and Queensland Governments and administers a fund provided from contributions by the Queensland Government on behalf of the sugar industry.

Until 15 May 1960 a domestic rebate of \$4.40 a ton of refined cane sugar used in processing approved fruit products was paid to Australian manufacturers, provided they bought fresh fruit for processing at prices not lower than those declared by the Committee as reasonable. This was increased to \$10 a ton from 16 May 1960 and to \$15 from 1 July 1969.

An export sugar rebate is also paid by the Committee to exporters of approved fruit products to ensure that manufacturers do not pay higher prices for the Australian sugar content than the Australian equivalent of the world sugar parity price. The Queensland Government is responsible for payment of a similar rebate to exporters of other approved products. Payment of the export sugar rebate in respect of approved fruit products has been made conditional upon satisfactory arrangements having been made for payment for the fresh fruit used for processing at not less than the prices (if any) which the Committee has declared to be reasonable.

Under the Sugar Agreement 1969 the Queensland Government contributes \$924,000 to the fund annually, out of which the Committee pays the domestic sugar rebate on approved fruit products manufactured. The Queensland Government also reimburses the Committee for the latter's payments of the export rebate paid on approved fruit products which are subsequently exported. Any money remaining in the fund after the payment of rebates and administrative expenses may be used by the Committee for the promotion of the use and sale of fruit products, or for research for the purpose of increasing the yield per acre of Australian fruit, or of obtaining information regarding Australian marketable fresh fruits.

### Financial assistance to the sugar industry

Under the provisions of the *Sugar Marketing Assistance Agreement Act 1967* and the *Sugar Industry Assistance Act 1967* the Commonwealth Government arranged two loans to assist the returns from No. 1 Pool in the 1966 and 1967 seasons. The total amount of \$23,327,590 so advanced is repayable over ten years commencing in mid-1971, and was not subject to interest before then. Thereafter it incurs interest at the rate of five per cent per annum.

### Bulk handling of sugar

Bulk handling and mechanised loading and unloading of raw sugar is now in operation throughout the Australian sugar industry. Terminals for the bulk loading of sugar were opened at Mackay in 1957, at Lucinda and Bundaberg in 1958, at Townsville in 1959, at Mourilyan in 1960, and at Cairns in 1964. A second storage shed at Bundaberg, a third shed at Mackay, second sheds at Lucinda, Townsville and Cairns, and an extension at Mourilyan have been opened subsequently to give a total bulk storage capacity of 1,449,000 long tons. The comparatively small New South Wales sugar industry was converted to bulk handling in 1954. Bulk receiving facilities are in operation at all Australian refineries.

### Mechanisation

Mechanisation of harvesting processes has been gradually developed and has been accelerated in recent years. In Queensland the proportion of the crop mechanically cut rose from 8.7 per cent in 1962 to 98.78 per cent in 1972 while the proportion mechanically loaded on to the transport conveying cane to mills rose from 64.5 per cent to 99.95 per cent in the same period. Chopper harvesters, which chop cane into short lengths and pour it into bins hauled alongside, harvested 92.56 per cent of the crop, and whole-stalk harvesters, which cut the cane at the base and deposit the whole stalks in bundles, cut 6.29 per cent. In New South Wales, mechanical harvesting is not employed as extensively as in Queensland but is being used on an increasing scale.

### Area of sugar cane

A brief outline of the development of the industry was included in earlier issues of the Year Book (*see* No. 38, page 985). The area of sugar cane in Australia for the seasons 1967-68 to 1971-72 is shown in the following table. The areas shown in the table exclude a very small acreage cut for green feed prior to 1971-72. The whole area planted is not cut for crushing during any one season, there being always a considerable amount of young and 'stand-over' cane as well as a small quantity required for plants.

SUGAR CANE: AREA(a), STATES, 1967-68 TO 1971-72  
(Acres)

Year	New South Wales			Queensland			Australia			Total
	Area crushed	Area of standover and newly- planted cane	Area cut for plants	Area crushed	Area of standover and newly- planted cane	Area cut for plants	Area crushed	Area of standover and newly- planted cane	Area cut for plants	
1967-68	22,181	18,761	488	530,828	89,494	13,194	553,009	108,255	13,682	674,946
1968-69	22,174	18,588	599	546,306	84,237	13,314	568,480	102,825	13,913	685,218
1969-70	19,838	19,490	487	505,978	120,735	13,808	525,816	140,225	14,295	680,336
1970-71	22,263	19,879	471	522,655	104,535	12,457	544,918	124,414	12,928	682,260
1971-72	23,055	18,330	662	554,521	77,514	12,164	577,576	95,844	12,826	686,246

(a) Excludes areas cut for green fodder prior to 1971-72.

### Production of cane and sugar

The production of sugar cane in 1971-72 was 19,084,000 tons, which was 671,000 tons above the previous record production in 1968-69. The production of raw sugar from 1940-41 is shown in plate 43, following.



**SUGAR CANE: PRODUCTION OF CANE AND RAW SUGAR, STATES, 1967-68 TO 1971-72**  
(Tons)

Year	New South Wales		Queensland		Australia	
	Cane	Sugar(a)	Cane	Sugar(a)	Cane	Sugar(a)
1967-68 . . .	1,038,507	120,583	15,717,789	2,213,810	16,756,296	2,334,393
1968-69 . . .	997,813	120,381	17,414,966	2,604,319	18,412,779	2,724,700
1969-70 . . .	835,232	97,721	14,699,785	2,081,036	15,535,017	2,178,757
1970-71 . . .	1,160,064	146,877	16,206,027	2,338,018	17,366,091	2,484,895
1971-72 . . .	964,712	121,857	18,119,492	2,627,451	19,084,204	2,749,308

(a) Raw sugar at 94 net titre.

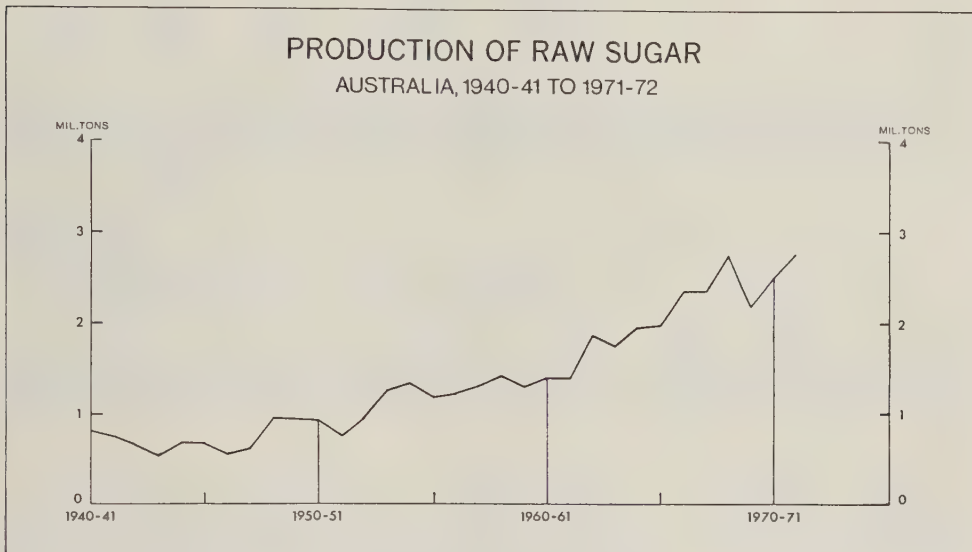


PLATE 43

Climatic conditions in New South Wales are such that the crop matures in from twenty to twenty-four months, whereas in Queensland a period of from twelve to sixteen months is sufficient. The average yields of cane and sugar per acre for the years 1967-68 to 1971-72 are shown below. Allowance should be made in interpreting these figures for the disparity in maturing periods noted above.

**SUGAR CANE AND SUGAR: YIELD PER ACRE, STATES, 1967-68 TO 1971-72**  
(Tons)

Year	New South Wales			Queensland			Australia		
	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar
1967-68 . . .	46.82	5.44	8.61	29.61	4.17	7.10	30.30	4.22	7.18
1968-69 . . .	45.00	5.43	8.29	31.88	4.77	6.69	32.39	4.79	6.76
1969-70 . . .	42.10	4.93	8.55	29.05	4.11	7.06	29.54	4.14	7.13
1970-71 . . .	52.11	6.60	7.90	31.01	4.47	6.93	31.87	4.54	7.02
1971-72 . . .	41.84	5.29	7.91	32.68	5.03	6.50	33.04	4.76	6.94

### Production and utilisation of sugar

Details of the production and utilisation of sugar for the years 1967-68 to 1971-72 are shown below. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

#### SUGAR: PRODUCTION AND UTILISATION, AUSTRALIA, 1967-68 TO 1971-72

Year		Changes in stocks(a)	Production (raw)(b)	Exports(c)	Miscel- laneous uses(d)	Consumption in Australia(e)	
						Total	Per head
		'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1967-68	. . .	+170.0	2,393.9	1,634.8	20.8	568.3	106.7
1968-69	. . .	n.a.	2,563.2	2,058.4	n.a.	584.7	107.6
1969-70	. . .	n.a.	2,167.1	1,387.9	n.a.	609.1	109.6
1970-71	. . .	n.a.	2,413.0	1,571.6	n.a.	626.2	110.4
1971-72	. . .	n.a.	2,538.6	1,994.4	n.a.	635.4	110.6

(a) Includes allowance for estimated sugar content of imported foodstuffs. (b) Year ended June; *tel quel* basis. Not comparable with production figures shown in production table as those relate to year ended March on a 94 net titre basis. (c) Raw and refined, including ships' stores and sugar in exported foodstuffs. (d) Includes refining losses and quantities used in golden syrup and treacle. (e) Includes sugar content of manufactured products consumed.

The quantity of sugar recorded as used in factories amounted to 359,978 tons in 1968-69, 373,380 tons in 1969-70 and 405,899 tons in 1971-72. Statistics for 1970-71 are not available. Particulars of sugar used in establishments not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1971-72 the reported consumption by factories engaged in the production of jams, jellies and preserved fruit and vegetables amounted to 77,875 tons, by those producing confectionery, ice cream, etc., to 82,117 tons, by breweries to 42,875 tons, and by factories producing aerated waters, cordials, etc., to 96,625 tons. Of the remainder, 35,875 tons was used in the production of biscuits, cakes and pastries, 30,781 tons in the production of cereal foods and the preparation of flour and baking mixes, and 39,751 tons used in various other industries.

### Sugar prices and returns

The current prices of sugar in Australia (as determined under the Sugar Agreement in Australia, see page 782) and details of net returns for raw sugar from 1967-68 to 1971-72 are shown in the following tables.

#### SUGAR: PRICES IN AUSTRALIA

Year	Raw sugar, 94 net titre			Refined sugar		
	Average return per ton received by millers and growers for—			Date of determination	Wholesale price to retailer per ton	Retail price capital cities per lb
	Home consumption	Exports(a)	Whole crop(a)			
	\$	\$	\$		\$	cents
1968-69(b)	143.20	63.04	82.10	19.6.67	206.72	10.5
1969-70(b)	143.10	80.83	99.76			
1970-71(c)	140.30	87.83	102.34			
1971-72(c)	138.70	100.94	110.35			
1972-73(c)	137.10	114.06	119.85			

(a) Includes 'excess' sugar. (b) Excludes repayable Commonwealth arranged loan (see page 784). (c) Includes repayment of Commonwealth loan.

## RAW SUGAR(a): NET RETURNS, AUSTRALIA, 1967-68 TO 1971-72

(Source: The Queensland Sugar Board)

Year	Proportion exported	Net value of exports per ton	Average price per ton for whole crop	Estimated value of crop
	per cent	\$	\$	\$'000
1967-68 . . .	72.89	59.45	82.05	191,471
1968-69 . . .	76.23	63.04	82.10	223,638
1969-70 . . .	69.61	80.83	99.76	217,279
1970-71 . . .	72.36	87.83	102.34	254,191
1971-72 . . .	75.09	100.94	110.35	303,290

(a) 94 net titre.

The estimated value of the raw sugar produced has been based upon details taken from the audited accounts of the Queensland Sugar Board. The values stated comprise the gross receipts from sales in Australia and overseas, less refining costs, freight, administrative charges, etc., and export charges. They include concessions to the fruit industry and other rebates, which in 1971-72 amounted to \$2,758,000, and also payment of the first instalment of the repayable Commonwealth grants referred to earlier. The value thus obtained represents the net market value of all raw sugar sold, which, less the rebates, is divided between the growers and millers in the approximate proportions of 70 per cent and 30 per cent respectively.

## Exports of sugar

## RAW AND REFINED SUGAR: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
Quantity . . . . . tons	1,597,235	2,029,177	1,364,302	1,546,372	1,976,270
Value . . . . . \$'000 f.o.b.	97,582	122,214	116,114	149,636	210,593

## Tobacco

Tobacco is a summer-growing annual which requires a temperate to tropical climate, adequate soil moisture and a frost-free period of approximately five months. In Australia almost all tobacco is grown under irrigation. Because of specialised requirements, production is limited to areas with suitable soils and climate. The main centres of production are the Mareeba-Dimbulah districts of north Queensland and Myrtleford in north-eastern Victoria. Other areas where tobacco is grown include Bundaberg, Beerwah and Texas (Queensland), Ashford (New South Wales) and Wangaratta (Victoria). All tobacco grown in Australia is of the flue-cured type except for small quantities of burley tobacco produced mainly in Victoria.

## Marketing

Between 9 May 1941 and 24 September 1948 all leaf was under the direct control of the Australian Tobacco Board, and prices were paid on leaf appraisal. Subsequently the Board was disbanded, and sales have been by open auction through the Tobacco Leaf Marketing Board (Queensland and northern New South Wales) and the Victorian Tobacco Growers Association Ltd (southern New South Wales and Victoria). In 1964 the Victorian Tobacco Leaf Marketing Board was set up to market the portion of the crop that was formerly sold by the Victorian Tobacco Growers Association Ltd, and in 1965 a Board was established in New South Wales. However, the actual physical handling of New South Wales leaf at auction is carried out by the Queensland and Victorian authorities.

In 1965 the Commonwealth and State Governments agreed to a stabilisation plan for the tobacco growing industry with an annual marketing quota of 26 million pounds (green weight) of leaf to be sold under an agreed grade and price schedule providing for an average minimum price, based on normal crop fall-out. The overall marketing quota is divided among tobacco-producing States according to a formula approved by the Australian Agricultural Council. The determination of grower disputes in regard to quotas from State allocations is the responsibility of State Quota Committees.



In 1968, the final year of the plan, the Governments concerned agreed that it should continue for a further period of five years with an increased marketing quota for the 1969 selling season of 28.5 million pounds, which was subsequently increased to 31.5 million pounds to correct industry stockholdings which were depleted by higher than expected manufacturer usage. Provision was made for an annual review of the quota and in 1970 a basic quota of 34 million pounds which was set for the 1971 season was retained for the 1972 and 1973 seasons. Each quota is to be divided among the producing States in the same proportions as the original quota.

The plan is administered by the Australian Tobacco Board, constituted under the *Tobacco Marketing Act* 1965-66 and representative of the Commonwealth, tobacco-producing States, growers, and manufacturers.

The guaranteed average minimum Australian price for the 1971 and 1972 seasons, 114.5 cents per lb, is 5.5 cents per lb above the price set for the 1970 season.

#### **Central Tobacco Advisory Committee**

The Australian Agricultural Council formed the Standing Advisory Committee on Tobacco during 1950. This Committee consisted of representatives of tobacco growers, tobacco manufacturers and the Commonwealth and State Governments. Its main functions were to review the industry and make recommendations on factors affecting its development and progress. The Committee was reconstituted as the Central Tobacco Advisory Committee in 1952-53.

In order to receive funds for increased research and extension activities, the Tobacco Industry Trust Account was established by the *Tobacco Industry Act* 1955-65 and came into operation on 2 December 1955. Growers and manufacturers contribute to the Trust Account by way of levies imposed on Australian leaf sold and purchased. These industry contributions are matched by the Commonwealth Government with payments made as funds are expended. The Governments of the three tobacco producing States make fixed annual contributions. Money standing to the credit of the Account may be applied for the purpose of research and investigation in connection with the tobacco industry, the training of personnel and the publication and dissemination of scientific and technical information for the industry.

The Central Tobacco Advisory Committee is required to make recommendations to the Minister for Primary Industry in regard to expenditure from the Tobacco Industry Trust Account. By 30 June 1972 expenditure from the Account amounted to \$8.3 million, and allocations for support of research projects in 1971-72 totalled \$893,251.

#### **Tobacco research and extension**

The Commonwealth Scientific and Industrial Research Organization and the State Departments of Agriculture in the tobacco growing States are carrying out investigations into a wide range of problems involving fundamental and applied research in plant breeding and variety evaluation, nutrition, disease and pest control, and cultural practices. The State Departments also provide extension services for tobacco growers. A Mechanisation Sub-Committee of the Central Tobacco Advisory Council was established in 1970 to investigate and advise on practical aspects of mechanisation of the tobacco-growing industry.

Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30 June 1953 are given in Year Book No. 40, pages 895-6, and in previous issues.

#### **Tobacco factories**

Manufacturers of Australian cigarettes and tobacco are granted a lower rate of duty on imported tobacco leaf, provided it is blended with a prescribed minimum percentage of Australian leaf. These percentages, which in November 1946 stood at 3 per cent for cigarettes and 5 per cent for tobacco, have been increased progressively in intervening years and since 1 January 1966 have been set at 50 per cent for both cigarettes and tobacco.

In 1971-72 the quantity of cured leaf recorded as used in tobacco factories in Australia amounted to 53 million lb, of which 29 million lb was of local origin. The balance was imported, chiefly from the United States of America.

#### **Tobacco area and production**

The area planted to tobacco in 1971-72 was 15.5 per cent below the record area established in 1962-63. Production at 35,306,000 lb was 6.5 per cent below the previous record established in 1970-71.

## TOBACCO: AREA AND PRODUCTION, STATES, 1967-68 TO 1971-72

Year		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
AREA (ACRES)								
1967-68	.	1,831	8,664	12,472	..	..	..	22,967
1968-69	.	2,190	9,727	13,837	..	..	..	25,754
1969-70	.	2,739	11,015	12,908	..	..	..	26,662
1970-71	.	3,042	10,481	13,411	..	..	..	26,934
1971-72	.	3,146	9,499	12,178	..	..	..	24,823
PRODUCTION OF DRIED LEAF ('000 lb)								
1967-68	.	2,075	7,625	15,021	..	..	..	24,721
1968-69	.	2,481	12,075	19,517	..	..	..	34,072
1969-70	.	3,061	15,516	18,975	..	..	..	37,553
1970-71	.	2,800	15,215	19,745	..	..	..	37,761
1971-72	.	4,090	12,709	18,507	..	..	..	35,306

**Imports and exports of tobacco**

Imports of tobacco and tobacco manufactures into Australia during 1971-72 were valued at \$28.2 million. This included 26.9 million lb of unmanufactured tobacco valued at \$18.2 million. Exports of tobacco and tobacco manufactures during 1971-72 were valued at \$4,168,000, including Australian produce, \$3,412,000.

**Cotton**

This annual shrub requires a hot climate and inter-row weed control. Lint (long fibres) is extracted from the seed cotton in the ginneries and is used for yarn. The residue, consisting of linters (short fibres), kernels and hulls (outer seed coat), is treated in oil mills. Linters are used in the manufacture of felts and other materials, where fibre length is of little importance. The kernels when crushed produce an oil which is used for both edible and industrial purposes. The residual meal is a useful high protein stockfeed; the hulls may be used as fuel.

Until 1964 cotton growing was mainly confined to Queensland, most of it being grown under conditions of natural rainfall. Since then there has been an increasing trend in the use of irrigation. A sound industry has been established in the Namoi and Macquarie Valleys in New South Wales with water provided by the Keepit and Burrendong Dams. More than three-quarters of Australia's raw cotton requirements are now produced in that area. Cotton is also grown under irrigation in Queensland and on the Ord River of Western Australia and to a lesser extent in the Murrumbidgee Irrigation Areas of New South Wales. Nearly all Australian cotton is now grown with the assistance of irrigation and acreage yields compare more than favourably with those obtained by traditional overseas cotton producing countries. Australian production currently satisfies all the requirements of local mills for short and medium staple cotton and should in the future, supply the comparatively small quantities of longer staple combing cottons currently imported. Cotton production in 1972 was 192,000 bales with an export surplus of some 75,000 bales. The 1973 cotton crop is estimated at around 197,000 bales with approximately 90,000 bales available for export.

**Cotton bounty**

For particulars of the *Cotton Bounty Act* 1951-1958, see page 1044 of Year Book No. 49. This Act was replaced by the *Raw Cotton Bounty Act* 1963-1966 under which the Commonwealth agreed to pay a bounty on raw cotton produced and sold for use in Australia at the rate of 13.4375 cents per lb for Middling 1" White, with premiums and discounts on grades and staples above and below, up to a maximum of \$4 million in any one year, for a period of five years from 1 January 1964. In 1968 this Act was amended to extend bounty payments to all cotton produced in Australia of a grade higher than Strict Good Ordinary, whether used in Australia or not, provided it has a staple length of  $\frac{7}{8}$ " or greater. The Commonwealth Government has phased out the bounty assistance. The maximum bounty remained at the previous level of \$4 million for 1969, falling to \$3 million in 1970, and was \$2 million in 1971 the final year in which it was paid.

## Cotton area and production

COTTON: AREA, PRODUCTION AND YIELD PER ACRE, STATES AND TERRITORIES  
1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)									
1967-68	53,474	..	11,629	..	11,782	..	..	..	76,885
1968-69	59,769	..	13,329	..	8,327	..	..	..	81,425
1969-70	56,662	..	13,358	..	7,210	..	..	..	77,230
1970-71	65,242	..	12,882	..	8,505	..	..	..	86,629
1971-72	72,425	..	17,042	..	9,540	..	..	..	99,007
PRODUCTION (UNGINNED) ('000 lb)									
1967-68	170,064	..	18,718	..	25,954	..	..	..	214,736
1968-69	173,759	..	28,104	..	21,560	..	..	..	223,423
1969-70	138,783	..	26,860	..	20,800	..	..	..	186,443
1970-71	85,122	..	19,191	..	27,700	..	..	..	132,013
1971-72	222,276	..	40,972	..	24,849	..	..	..	288,097
YIELD PER ACRE (lb)									
1967-68	3,180	..	1,610	..	2,203	..	..	..	2,793
1968-69	2,907	..	2,108	..	2,589	..	..	..	2,744
1969-70	2,449	..	2,011	..	2,885	..	..	..	2,414
1970-71	1,305	..	1,490	..	3,257	..	..	..	1,524
1971-72	3,069	..	2,404	..	2,605	..	..	..	2,910

NOTE. Before 1968-69 production in Queensland relates to the crop harvested in the first of the years mentioned, and in other States to the year following: e.g., for 1967-68, the Queensland crop was harvested during 1967, while the crop in other States was harvested during 1968.

Production of ginned cotton for 1966-67, was 35,510,000 lb; 1967-68, 70,405,000 lb; 1968-69, 74,035,000 lb; 1969-70, 70,271,000 lb; and 1971-72, 85,905,000 lb. Figures for 1970-71 are not available.

The gross value of cotton for the five years ended 1971-72 was \$19,675,000; \$20,753,000; \$18,979,000; \$14,015,000; and \$29,794,000 respectively.

## RAW COTTON(a): IMPORTS AND EXPORTS, AUSTRALIA 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
Imports—					
Quantity . . . '000 lb	27,066	12,497	10,378	15,421	19,708
Value . . . \$'000 f.o.b.	6,866	3,766	3,003	4,314	5,783
Exports—					
Quantity . . . '000 lb	n.a.	n.a.	25,445	16,351	5,338
Value . . . \$'000 f.o.b.	n.a.	n.a.	5,124	3,431	1,555

(a) Excludes linters.

Japan and Indonesia were the principal importing countries, taking 3,062,000 lb and 1,623,000 lb respectively in 1971-72.



## Peanuts

Peanuts, or groundnuts, are a sub-tropical legume (and hence summer growers), the pods of which mature beneath the surface of the soil. They thus require well drained, light textured soils. At harvest the plant is pulled, wind-rowed, field-cured for two to four weeks, and then threshed to recover the pods. The main products of the industry are nuts, peanut oil and oil cake.

In Australia, peanuts for crushing for oil arise as a by-product in the production of nuts for edible purposes. The oil is used extensively as a cooking and salad oil and in the manufacture of margarine.

The production of peanuts in Australia is confined mainly to Queensland, although small quantities are grown in New South Wales, the Northern Territory and, in some years, Western Australia.

PEANUTS: AREA AND PRODUCTION, STATES, 1967-68 TO 1971-72

Year	Area (Acres)			Production (cwt)		
	N.S.W.	Qld	Aust.	N.S.W.	Qld	Aust.
1967-68 . . . .	353	61,373	61,738	3,920	602,207	606,159
1968-69 . . . .	183	78,454	(a)78,637	1,861	332,740	(a)334,601
1969-70 . . . .	232	82,789	(a)83,021	4,039	836,812	(a)840,851
1970-71 . . . .	390	94,895	95,343	5,151	607,172	612,618
1971-72 . . . .	561	82,744	(a)83,405	4,755	901,024	(a)906,664

(a) Incomplete: excludes Northern Territory.

The gross value of the 1971-72 crop was \$12,234,000 which was approximately \$4,236,000 more than in 1970-71. Total supplies available for consumption in Australia in 1971-72 were 23,329 tons in shell equivalent. Exports of peanuts and peanut products for the year were 1,563 tons.

## Flax

The flax plant is a summer-growing annual. Varieties have been developed for the production of either fibre or linseed, which when crushed yields an industrial oil used extensively in the manufacture of paint and linoleum. The introduction of synthetics into these fields has reduced the demand for linseed oil. Flax for the production of fibre was last recorded in 1964-65. Production of linseed during 1971-72 was 10,067 tons.

The main producing areas are the wheat belt of New South Wales, western and north-eastern districts of Victoria, the Esperance district of Western Australia and the Darling Downs in Queensland.

Particulars of area and production of flax for linseed, by States, are given in the following table for the years 1967-68 to 1971-72.

FLAX FOR LINSEED: AREA AND PRODUCTION, STATES, 1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
Area (acres)—						
1967-68 . . . .	9,947	9,365	27,764	516	6,886	54,478
1968-69 . . . .	15,164	14,304	21,459	1,025	18,645	70,597
1969-70 . . . .	49,455	18,880	21,513	977	30,812	121,637
1970-71 . . . .	50,751	16,877	8,786	695	25,751	102,860
1971-72 . . . .	23,206	9,127	4,626	424	11,845	49,228
Production (tons of linseed)—						
1967-68 . . . .	952	804	6,571	72	2,083	10,482
1968-69 . . . .	2,614	5,079	6,132	350	5,321	19,496
1969-70 . . . .	14,499	9,312	5,701	355	6,186	36,053
1970-71 . . . .	16,917	6,370	1,937	254	4,840	30,318
1971-72 . . . .	3,654	3,334	1,280	91	1,708	10,067

## Hops

Hops are grown from perennial rootstocks over deep, well-drained soils in localities sheltered from the wind. The hop-bearing vine shoots are carried upon wire and coir trellises, from which they are later harvested. The green hops are kiln-dried and bleached with sulphur dioxide fumes, following which the cured hops are pressed into bales.

Hop growing in Australia is confined to the Derwent, Huon and Channel areas of Tasmania and the Ovens and King Valleys in Victoria. A small area is also under hops in Western Australia, near Manjimup, but details are not available for publication.

### Production and imports of hops

The production of hops in Australia is adequate to meet local requirements, and in recent years small quantities have been exported. In the following table details of the production and imports of hops and the quantity of hops used in breweries are shown for each of the years 1967-68 to 1971-72. Exports of hops are negligible and are not recorded separately.

**HOPS: PRODUCTION AND DISPOSAL, AUSTRALIA**  
1967-68 TO 1971-72

Year	Production(a)		Imports	Net available supplies(b)	Quantity used in breweries
	Quantity	Gross value			
	cwt	\$'000	cwt	cwt	cwt
1967-68	36,752	3,211	1,370	38,122	30,501
1968-69	42,757	3,788	1,501	44,258	34,077
1969-70	40,319	3,588	357	40,676	34,545
1970-71	33,591	3,133	361	33,952	34,652
1971-72	36,368	3,658	402	36,770	30,241

(a) Excludes production in Western Australia, for which details are not available for publication.  
(b) Disregards movements in stocks.

## Rapeseed

Rapeseed is obtained from several varieties of brassica, which are cultivated in temperate and warm temperate zones for their oil producing seed.

The introduction of wheat quotas in Australia and the buoyant world market for oilseeds has brought about an expansion of areas sown to rape in the past three years in New South Wales, Western Australia, Victoria and South Australia.

Domestic production has increased from 88,000 cwt in 1969-70 to 1,075,018 cwt in 1971-72 with the major part of the production for that year being derived from Western Australia.

Rapeseed oil is used mainly as a salad and cooking oil with some minor amounts being utilised for industrial purposes. A protein meal is derived as a by-product in the crushing process.

## Safflower

Safflower is best cultivated either in the warm temperate zones or as a winter crop in the tropical or sub-tropical regions, on moderately fertile, weed-free, clay or sandy loams. Adequate moisture is required up to the flowering stage, after which it is relatively drought resistant. The soil preparation and sowing techniques are similar to those employed for small grains; it is usually harvested by combine when the seed is hard and dry. The oil, produced by crushing, is used in the manufacture of margarine, soaps, paints, varnishes, enamels, and textiles.

## SAFFLOWER: AREA AND PRODUCTION, STATES AND TERRITORIES, 1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)									
1967-68	8,550	489	95,351	(a)	225	..	..	..	(b)104,615
1968-69	2,415	199	43,589	..	170	..	..	..	46,373
1969-70	16,022	50	9,475	(a)	1,203	..	..	..	(b)26,750
1970-71	49,012	12,530	5,073	420	1,349	..	..	..	68,384
1971-72	46,146	3,143	30,843	488	2,923	..	..	..	83,543
PRODUCTION (BUSHELS)(c)									
1967-68	59,310	1,375	815,354	(a)	2,207	..	..	..	(b)878,246
1968-69	14,963	1,268	552,555	..	1,153	..	..	..	569,939
1969-70	155,879	164	67,470	(a)	5,994	..	..	..	(b)229,507
1970-71	406,184	76,872	20,462	4,042	7,828	..	..	..	515,388
1971-72	583,800	39,802	190,818	4,458	29,805	..	..	..	848,683

(a) Not available for publication.

(b) Incomplete; see individual States.

(c) 40 lb per bushel.

Imports of crude safflower seed oil in 1970-71 and 1971-72 totalled 1,636,000 gallons and 686,000 gallons respectively. These imports came mainly from the United States of America.

### Sunflower seed

Sunflowers are summer growing annuals produced mainly under raingrown conditions in the three eastern mainland States of Australia. The cultivation of sunflowers has developed rapidly in recent years to make it one of the major oilseed crops.

The seed for which the plant is cultivated yields a high quality dual purpose oil and a by-product protein meal used for stockfeed. Main uses for the oil are in the manufacture of margarine, as a salad and cooking oil, and for industrial purposes.

The introduction of wheat quotas and the development of high oil yielding varieties of sunflower seed have resulted in an increase in Australian production from 35,000 cwt in 1967-68 to 2,904,000 cwt in 1971-72.

### Vegetables for human consumption

#### Area, production and trade

Vegetables were initially grown on a large scale near the main cities, where there was ready access to reliable water supplies and to markets. Later, the expansion of irrigation areas and improvement in transport services resulted in their production being extended into many other areas. At present, because of the wide diversity of climatic conditions across Australia, supplies for main city markets are drawn from widely different areas, depending upon the times of maturity of the various crops. Apart from potatoes and onions, which are sold in some States through marketing boards, the bulk of vegetable trading takes place at the metropolitan markets of the cities concerned.

Details of the areas planted and production of individual kinds of vegetables are shown below for the seasons 1969-70 to 1971-72. Certain particulars shown are incomplete in that details for specific vegetables in some States are either not available or are not available for publication. For further information see the bulletin *Rural Industries*. Details of the estimated consumption of vegetables for a series of years ending 1971-72 are given in the chapter Miscellaneous.



## VEGETABLES FOR HUMAN CONSUMPTION: AUSTRALIA, 1969-70 TO 1971-72

Vegetable	1969-70		1970-71		1971-72	
	Area sown	Pro-duction	Area sown	Pro-duction	Area sown	Pro-duction
	acres	tons	acres	tons	acres	tons
Asparagus . . . . .	4,094	5,201	4,637	5,194	4,920	6,605
Beans, french and runner . .	20,018	39,243	18,512	33,342	19,698	37,500
Beetroot . . . . .	2,140	22,650	1,890	19,062	2,054	22,977
Cabbages and brussel sprouts .	6,388	68,830	6,292	70,066	6,706	78,961
Carrots . . . . .	7,295	80,819	7,524	83,392	7,291	87,813
Cauliflowers . . . . .	6,881	92,348	6,550	77,550	6,627	77,345
Celery . . . . .	1,023	16,882	955	15,314	1,080	17,009
Cucumbers . . . . .	2,380	10,098	2,306	10,833	2,700	13,580
Lettuce . . . . .	5,557	31,638	5,386	25,695	5,414	26,679
Onions . . . . .	10,299	84,177	10,710	91,483	10,919	98,766
Parsnips . . . . .	1,366	12,022	1,223	11,236	1,157	10,193
Peas, green . . . . .	62,138	135,257	40,146	80,005	53,047	116,478
Potatoes . . . . .	107,062	749,763	95,404	735,173	99,833	808,820
Tomatoes . . . . .	17,819	160,339	18,181	173,472	20,551	186,176
Turnips, swede and white . .	1,748	7,007	1,945	8,664	2,118	10,418
All other . . . . .	38,377	..	43,254	..	45,038	..
<b>Total . . . . .</b>	<b>294,585</b>	<b>..</b>	<b>264,915</b>	<b>..</b>	<b>289,153</b>	<b>..</b>

**Processed vegetables**

Total production of canned vegetables in 1971-72 amounted to 252,627,000 lb. The principal types produced were baked beans (including pork and beans), 47,117,000 lb; beetroot, 65,357,000 lb; green peas (excluding mint processed peas), 25,177,000 lb; tomatoes, 19,045,000 lb; asparagus, 11,335,000 lb and sweet corn, 18,938,000 lb.

The production of dehydrated vegetables, including split peas, during 1969-70 amounted to 17,907,000 lb. Figures for 1970-71 and 1971-72 are not yet available. Production of potato crisps, chips and flakes during 1971-72 was 29,981,000 lb.

There has been rapid development in the quick-frozen vegetable industry. Data were collected for the first time in 1957-58, when 13,846,000 lb of frozen vegetables were produced, made up principally of 10,131,000 lb of peas and 2,540,000 lb of beans. In 1971-72 the production was 198,297,000 lb, of which 87,917,000 lb were peas and 41,554,000 lb were beans.

**Exports and imports of vegetables**

Overseas exports of fresh and frozen vegetables during 1971-72 amounted to 65,052,000 lb valued at \$3,831,000; dried vegetables, 18,163,000 lb valued at \$2,123,000; preserved vegetables, 1,046,000 lb valued at \$1,303,000; and other prepared or preserved vegetables, 3,538,000 lb valued at \$611,000.

Imports of fresh and frozen vegetables during 1971-72 amounted to 13,593,000 lb valued at \$2,152,000.

**Potatoes**

This crop requires deep friable soils, which in Australia are usually basaltic, alluvial or swampy in origin. Fertiliser requirements, which are generally high, vary with the type of soil. Potatoes are killed by heavy frost, but require only moderate temperatures for growth. Mechanical planters and diggers are used to a variable extent depending upon a variety of factors including terrain, state of the soil and scale of operations. Seed certification schemes, which operate in all States except Queensland, provide a supply of seed which is free from viral, fungal and bacterial diseases. In Australia potatoes are used almost entirely for human consumption and not for the production of starch or alcohol. They are rarely used as stock feed.

*Area, production, and yield per acre.* Victoria possesses particular advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavourable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands and the south-western and Gippsland districts. New South Wales and Queensland come next in order of acreage sown. In New South Wales production is chiefly in the tablelands district.

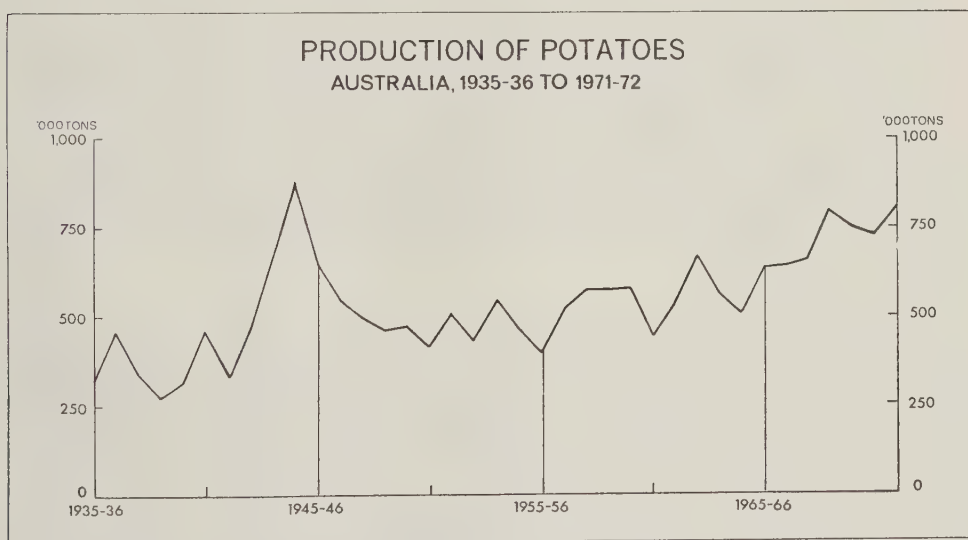
**POTATOES: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND TERRITORIES, 1967-68 TO 1971-72**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>AREA (ACRES)</b>									
1967-68 . .	24,334	40,329	17,347	6,527	6,149	10,960	(a)	22	(b)105,668
1968-69 . .	29,236	39,979	18,515	7,643	6,588	11,461	(a)	15	(b)113,437
1969-70 . .	25,865	39,765	17,712	8,021	6,332	9,367	(a)	(a)	(b)107,062
1970-71 . .	22,102	34,965	15,925	7,160	6,246	8,994	(a)	12	(b)95,404
1971-72 . .	24,678	34,560	18,199	6,858	6,633	8,879	26	(a)	(b)99,833
<b>PRODUCTION (TONS)</b>									
1967-68 . .	122,795	215,941	106,429	63,331	70,469	79,058	(a)	89	(b)658,112
1968-69 . .	160,823	299,961	122,990	68,018	74,435	72,120	(a)	131	(b)798,478
1969-70 . .	142,047	279,553	115,455	78,624	67,164	66,920	(a)	(a)	(b)749,763
1970-71 . .	143,387	272,200	108,659	71,380	68,058	71,444	(a)	45	(b)735,173
1971-72 . .	169,087	301,863	130,523	70,608	67,339	69,258	142	(a)	(b)808,820
<b>YIELD PER ACRE (TONS)</b>									
1967-68 . .	5.05	5.35	6.14	9.70	11.46	7.21	(a)	4.05	(b)6.23
1968-69 . .	5.50	7.50	6.64	8.90	11.30	6.29	(a)	8.73	(b)7.04
1969-70 . .	5.49	7.03	6.52	9.80	10.61	7.14	(a)	(a)	(b)7.00
1970-71 . .	6.49	7.78	6.82	9.97	10.90	7.94	(a)	3.75	(b)7.71
1971-72 . .	6.85	8.73	7.17	10.30	10.15	7.80	5.46	(a)	(b)8.10

(a) Not available for publication.

(b) Incomplete; see individual territories.

The production of potatoes from 1935-36 is shown in plate 44, below.



**PLATE 44**

Potato marketing boards were established in all States except Tasmania under separate State legislation after Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948. The life of the Queensland Board was not extended when its term ended in 1954. The New South Wales Board was voted out by growers in 1956, and the Victorian Board also ceased functioning in that year. The Boards in South Australia and Western Australia are the only statutory boards still in operation.

*Value of potato crop.* The estimated gross value of the potato crop of each State for the 1971-72 season and the value per acre are shown in the following table.

POTATOES: VALUE OF CROP, STATES, 1971-72

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(a)
Aggregate value	\$'000	8,991	15,002	8,420	4,393	5,923	2,626	45,375
Value per acre	\$	364.33	434.08	462.66	640.56	892.95	295.75	454.50

(a) Excludes Australian Capital Territory.

*Consumption and exports of potatoes.* The annual consumption of potatoes in Australia during each of the three years 1969-70 to 1971-72 amounted to 679,300 tons, 675,900 tons and 746,900 tons respectively or 122.9 lb, 119.8 lb and 129.7 lb respectively per head of population. These figures exclude the quantities used for seed, which averaged about 50,000 tons annually over this period. Details showing exports and imports for the years 1967-68 to 1971-72 are given in the following table.

POTATOES: EXPORTS AND IMPORTS, AUSTRALIA, 1967-68 TO 1971-72

Year	Exports		Imports	
	Quantity	Value	Quantity	Value
		\$'000		\$'000
	tons	f.o.b.	tons	f.o.b.
1967-68	8,150	693	..	..
1968-69	12,591	966	237	12
1969-70	20,583	1,474	..	..
1970-71	11,475	978	..	..
1971-72	11,763	1,039	..	..

Australia's principal markets are Papua New Guinea, Singapore, New Caledonia and Fiji.

## Fruit

The varieties of fruit grown differ in various parts of the States, ranging from pineapples, papaws and mangoes in the tropics to strawberries, raspberries and currants in the colder parts of the temperate zone. In New South Wales citrus fruit (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears and cherries are grown extensively. The principal varieties grown in Victoria are apples, pears, peaches, oranges, and apricots. In Queensland apples, pineapples, bananas, oranges, mandarins, peaches and plums are the major fruits cultivated. In South Australia, in addition to oranges, apples, peaches, apricots, and pears, almonds and olives are grown extensively. In Western Australia apples, oranges, plums, and pears are the chief varieties. In Tasmania apples are by far the most important type of fruit grown, but small fruit, such as currants raspberries and gooseberries, are also grown extensively, the balance of the area being occupied mainly with pears and apricots.

### Apples and pears

The *Apple and Pear Organization Act* 1938-1966 provides for the establishment of an Australian Apple and Pear Board comprising representatives of growers, exporters, employees, and the Commonwealth Government. A representative in London has also been appointed by the Board. An export levy to meet the expenses of the Board is provided for in the *Apple and Pear Export Charges Act* 1938-1968. The function of the Board is the organisation and control of exports of fresh apples and pears, and it has the power to regulate shipments, determine export quotas, allocate consignments from each State, and recommend the licensing of exporters. The Board contributes to apple and pear publicity activities overseas.

Early in October 1971 the Government approved a stabilisation plan for the export of apples and pears "at risk", with an estimated Commonwealth liability of \$10 million over 5 years, commencing with the 1971 season. The plan establishes average seasonal returns (including the returns from forward sales) for each variety, which are then compared with the agreed support price for each variety and the extent of the deficiency or surplus is determined.

### Canned Fruit

The overseas marketing of canned fruit is regulated by the *Canned Fruits Export Marketing Act* 1963-1970. Under this Act the Australian Canned Fruits Board sets terms and conditions for overseas sales. All exporters must hold an export licence issued by the Minister for Primary Industry on



the recommendation of the Board. The Board comprises representatives of the Commonwealth Government (one), co-operative canners of deciduous fruit (three), proprietary canners of deciduous fruit (three), pineapple canners (one) and growers of deciduous canning fruit (three). The Board maintains a London office. The *Canned Fruits Export Charges Act 1926-1966* provides for a levy on exports to meet the Board's expenses, which include contributions to overseas publicity connected with the canned fruit industry. In 1963 an excise duty was imposed by the *Canned Fruits Excise Act 1963* on canned deciduous fruit entered for domestic consumption, and the proceeds of the duty are made available to the Board.

In 1959 the Australian Canned Fruit Sales Promotion Committee was established to promote the sale of canned deciduous fruit on the home market and overseas. The operations of the Committee are financed by a levy on fruit accepted by the canneries for the production of canned fruit. The Committee comprises representatives of growers and processors of canning fruit and a representative of the Commonwealth Government.

In February 1971 the Canned Deciduous Fruit Industry Advisory Committee was established under the auspices of the Australian Agricultural Council to advise industry and Governments on the longer-term problems facing the industry. The Committee is representative of the Commonwealth, the States and canners and growers.

### Overseas marketing of fruits

Details of the overseas marketing of fruits were published in Year Book No. 55 and earlier issues.

### Area and production of fruit

The total area under fruit in Australia in 1971-72 was 304,164 acres, 2.9 per cent less than the record acreage established in 1965-66.

### FRUIT (EXCLUDING GRAPEVINES): AREA(a), STATES AND TERRITORIES, 1967-68 TO 1971-72 (Acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	95,798	71,158	51,391	45,113	25,598	21,762	98	37	310,955
1968-69	94,685	71,598	52,750	44,497	25,366	21,429	90	32	310,447
1969-70	95,326	70,883	53,048	44,801	24,130	21,157	71	38	309,454
1970-71	93,167	66,614	54,752	45,302	23,791	20,837	120	38	304,621
1971-72	96,903	67,227	55,412	42,478	22,559	19,329	221	35	304,164

(a) Bearing and not bearing.

### ORCHARD FRUIT (INCLUDING EDIBLE TREE NUTS), TOTAL NUMBER OF TREES STATES AND TERRITORIES, 1971-72 ('000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Pome—									
Apples	1,638	1,699	1,311	671	1,248	2,540	..	5	9,111
Pears	261	1,644	127	208	88	165	..	..	2,494
Quinces	2	6	(a)	3	..	..	..	..	(b)11
Citrus—									
Oranges	2,638	658	260	1,493	370	..	1	..	5,420
Lemons and limes	340	112	42	100	42	..	1	..	636
Mandarins	212	61	237	85	54	..	..	..	650
Grapefruit	107	45	23	62	12	..	..	..	249
Stone—									
Apricots	152	326	55	453	19	50	..	..	1,054
Cherries	377	209	1	72	7	9	..	..	675
Nectarines	47	51	46	26	9	3	..	..	182
Olives	19	91	..	61	21	..	..	..	192
Peaches	689	1,353	173	449	64	5	..	..	2,733
Plums and prunes	499	175	159	84	83	5	..	..	1,006
Nuts—									
Almonds	2	21	..	638	3	..	..	(a)	(b)663
Macadamia	43	..	126	..	..	..	..	..	169
Walnuts	1	7	..	6	2	..	..	(a)	(b)16
Other orchard n.e.i.—									
Custard apples	..	..	17	..	..	..	..	..	17
Figs	3	3	..	7	1	..	..	..	14
Mangoes	1	..	51	..	..	..	1	..	52

(a) Not available for publication.

(b) Incomplete, see individual States.

**ORCHARD FRUIT (INCLUDING EDIBLE TREE NUTS), PRODUCTION  
STATES AND TERRITORIES, 1971-72**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Pome—	bus	bus	bus	bus	bus	bus	bus	bus	bus
Apples . . .	3,640	3,629	1,839	1,177	2,750	5,873	..	5	18,913
Pears . . .	687	7,144	192	486	222	296	..	..	9,026
Quinces . . .	4	13	(a)	8	..	..	..	..	(b)26
Citrus—									
Oranges . . .	5,700	1,678	926	4,681	376	..	1	..	13,362
Lemons and limes . . .	667	229	191	164	133	..	1	..	1,385
Mandarins . . .	269	118	526	140	43	..	..	..	1,097
Grapefruit . . .	330	150	49	299	18	..	1	..	846
Stone—									
Apricots . . .	340	617	52	403	17	24	..	..	1,454
Cherries . . .	269	189	1	40	2	2	..	..	503
Nectarines . . .	53	43	39	16	10	2	..	..	163
Olives . . .	20	38	..	58	14	..	..	..	129
Peaches . . .	1,405	2,924	185	1,138	90	3	..	..	5,745
Plums and prunes . . .	455	158	131	41	98	4	..	..	886
Nuts—	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb
Almonds . . .	4	34	..	2,917	2	..	..	(a)	(b)2,956
Macadamia . . .	76	..	130	..	..	..	..	..	206
Walnuts . . .	5	158	..	49	17	..	..	..	228
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Other orchard n.e.i.—	bus	bus	bus	bus	bus	bus	bus	bus	bus
Custard apples . . .	..	..	21	..	..	..	..	..	21
Figs . . .	7	3	..	10	1	..	..	..	21
Mangoes . . .	2	..	63	..	..	..	1	..	67

(a) Not available for publication.

(b) Incomplete; see individual States.

**BERRY AND OTHER FRUITS (EXCLUDING GRAPEVINES): STATES AND  
TERRITORIES, 1971-72**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>TOTAL AREA BEARING AND NOT BEARING (ACRES)</b>									
Small and berry fruit—									
Currants (black, red) . . .	..	..	..	(a)	..	745	..	..	(b)745
Raspberries . . .	..	157	..	(a)	..	611	..	..	768
Strawberries . . .	111	441	260	185	26	73	..	..	1,096
Other . . .	99	218	21	31	3	139	..	..	511
Other fruit—									
Bananas . . .	18,194	..	6,431	..	416	..	76	..	25,117
Papaws . . .	32	..	1,164	..	..	..	(a)	..	(b)1,196
Passionfruit . . .	240	62	695	..	123	..	..	..	1,120
Pineapples . . .	193	..	15,548	..	(a)	..	23	..	(b)15,764

**PRODUCTION**

	cwt	cwt	cwt	cwt	cwt	cwt	cwt	cwt	cwt
Small and berry fruit—									
Currants (black, red) . . .	..	..	..	(a)	..	22,428	..	..	(b)22,428
Raspberries . . .	..	3,003	..	(a)	..	25,813	..	..	(b)28,816
Strawberries . . .	5,698	27,576	16,391	12,227	2,216	1,679	..	..	65,787
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Other fruit—	bus	bus	bus	bus	bus	bus	bus	bus	bus
Bananas . . .	3,627	..	1,178	..	223	..	9	..	5,036
Papaws . . .	6	..	446	..	..	..	(a)	..	(b)452
Passionfruit . . .	31	2	155	..	5	..	..	..	193
Pineapples . . .	54	..	8,030	..	(a)	..	1	..	(b)8,085

(a) Not available for publication.

(b) Incomplete; see individual States.

## Principal fruit crops

## PRINCIPAL FRUIT CROPS: PRODUCTION, AND GROSS VALUE OF PRODUCTION, AUSTRALIA, 1967-68 TO 1971-72

<i>Year</i>	<i>Apples</i>	<i>Apricots</i>	<i>Bananas</i>	<i>Oranges</i>	<i>Peaches</i>	<i>Pears</i>	<i>Pineapples</i>	<i>Plums and prunes</i>
PRODUCTION ('000 BUSHELS)								
1967-68.	19,615	1,519	5,145	9,846	6,294	7,351	6,804	778
1968-69.	22,174	2,004	4,940	12,137	5,280	5,245	6,363	904
1969-70.	22,259	1,814	5,160	10,787	5,513	9,331	6,344	985
1970-71.	23,238	2,425	5,142	14,804	6,012	9,192	7,408	909
1971-72.	18,913	1,454	5,036	13,362	5,745	9,026	8,085	886
GROSS VALUE OF PRODUCTION (\$'000)								
1967-68.	49,741	4,637	19,636	24,496	14,123	16,469	6,470	3,362
1968-69.	56,146	6,992	19,128	26,095	12,685	13,512	7,482	4,697
1969-70.	56,120	7,438	24,961	29,026	15,101	23,809	7,144	5,828
1970-71.	58,339	9,392	20,033	33,029	15,760	20,855	9,722	6,360
1971-72.	49,666	8,226	20,958	30,542	15,739	19,559	9,629	4,829

## Production and consumption of jams and jellies and preserved fruit

In Australia considerable quantities of fruit are used in the production of jams and jellies and for preserving. Fruit usage in factories in 1968-69 and 1969-70 amounted to 459,000 tons and 486,000 tons respectively. Statistics for 1970-71 are not available. During 1971-72 output of jams, conserves, fruit spreads, etc., amounted to 77,966,000 lb, while output of preserved fruit amounted to 558,944,000 lb. Of the latter figure, peaches accounted for 199,743,000 lb, pears 102,605,000 lb, and pineapples 72,645,000 lb.

Details of the estimated consumption of fruit and fruit products for a series of years ending 1971-72 are shown in Chapter 29, Miscellaneous.

## Imports and exports of fruit and fruit products

The imports of fresh fruit into Australia are negligible, while those of dried fruit consists mainly of dates, approximately 90 per cent of which are obtained from Iraq and Iran; the bulk of the remainder coming from Turkey and the People's Republic of China. A considerable export trade in fresh and chilled, and dried fruit is carried on by Australia with overseas countries. The values of the shipments in 1971-72 amounted to \$28,680,000 for fresh and chilled fruit, and \$19,770,000 for dried fruit respectively. Apples constitute over half of the fresh fruit exported, although exports of pears and citrus fruits are considerable.

## FRESH AND CHILLED FRUIT: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72

<i>Year</i>	<i>Apples</i>		<i>Pears</i>		<i>Citrus</i>		<i>Total value(a)</i>
	<i>Quantity</i>	<i>Value</i>	<i>Quantity</i>	<i>Value</i>	<i>Quantity</i>	<i>Value</i>	
	'000lb	\$'000 f.o.b.	'000lb	\$'000 f.o.b.	'000lb	\$'000 f.o.b.	\$'000 f.o.b.
1967-68	277,814	17,368	68,922	5,442	54,875	3,656	27,535
1968-69	287,135	19,964	46,652	4,107	68,312	4,423	29,456
1969-70	296,806	20,410	81,324	6,486	48,113	3,216	31,011
1970-71	313,219	21,881	76,029	6,411	59,520	3,721	32,012
1971-72	216,773	15,889	75,914	6,969	76,527	4,824	28,680

(a) Includes exports of all other fresh and chilled fruit.



The quantity and value of overseas imports and exports of dried fruit, other than sultanas, raisins and currants, for the years 1967-68 to 1971-72 are shown below.

**DRIED TREE FRUIT(a): IMPORTS AND EXPORTS, AUSTRALIA  
1967-68 TO 1971-72**

Year	Imports		Exports	
	Quantity	Value	Quantity	Value
	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.
1967-68 . . .	9,054	779	8,038	2,018
1968-69 . . .	10,335	934	5,619	2,120
1969-70 . . .	11,834	1,161	4,909	1,730
1970-71 . . .	8,612	990	5,029	1,537
1971-72 . . .	8,444	1,046	8,474	2,207

(a) Excludes sultanas, raisins and currants dealt with separately under Vineyards (see below).

Exports of jams and jellies in 1971-72 were 6,291,000 lb valued at \$1,132,000, compared with 6,160,000 lb, valued at \$1,032,000 in 1970-71. Imports of jams and jellies in 1971-72 were 4,033,000 lb, valued at \$810,000, compared with 5,546,000 lb, valued at \$877,000 in 1970-71.

**EXPORTS OF CANNED OR BOTTLED FRUIT: AUSTRALIA, 1967-68 TO 1971-72**

Year	Peaches		Pears		Fruit salad		Apricots		Total
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Value(a)
	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	\$'000 f.o.b.
1967-68 . . .	198,736	22,115	108,712	13,694	37,673	5,393	17,729	2,169	50,661
1968-69 . . .	126,176	14,533	91,739	11,361	37,300	5,345	13,970	1,726	37,842
1969-70 . . .	124,528	14,783	82,020	10,708	33,301	5,104	12,446	1,611	37,231
1970-71 . . .	110,201	13,971	113,266	14,380	47,129	7,201	14,765	1,924	42,891
1971-72 . . .	105,225	13,202	83,390	10,809	40,035	6,337	12,060	1,623	36,462

(a) Includes exports of all other canned or bottled fruit.

Exports of pulped fruit during 1971-72 amounted to 896,000 lb valued at \$146,000.

The total value of preserved fruit and fruit preparations (including fruit juices) imported into Australia during 1971-72 was \$4,430,000. The value of exports of fruit juices in 1971-72 was \$1,292,000.

## Vineyards

Grapes require a warm to hot climate and a predominantly winter rainfall. Freedom from late spring frosts is essential. They are grown for wine-making, drying and, to a minor extent, for table use. In Australia wine is produced very largely from irrigated crops, as are dried fruits. Some of the better known wine producing areas are the Murray Valley (South Australia and Victoria), Barossa Valley and Southern Vales Areas (South Australia), the Murrumbidgee Irrigation Areas and the Hunter Valley (New South Wales), the Mildura, Rutherglen and Stawell districts of Victoria, and the Swan Valley (Western Australia). Nearly all the dried fruit is produced along the River Murray and its tributaries, with small localised areas in other States.

### Area of vineyards

The area under vineyards in the 1971-72 season in Victoria and South Australia constituted 74 per cent of the total area of vineyards.

**VINEYARDS: AREA(a), STATES, 1967-68 TO 1971-72**

(Acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
1967-68 . . .	22,155	48,725	3,400	58,129	7,665	140,074
1968-69 . . .	22,749	48,970	3,508	60,574	7,270	143,071
1969-70 . . .	25,422	49,838	3,614	64,837	6,648	150,359
1970-71 . . .	27,792	50,933	3,846	68,332	6,708	157,611
1971-72p . . .	31,270	51,383	3,943	71,090	6,735	164,421

(a) Bearing and not bearing.

### Wine industry

Australia produces wine of every type and also brandy. In recent years there has been a distinct trend towards greater consumption and production of unfortified or table wines. Until 1957-58 production of these wines (which include burgundy, claret, riesling, sauterne, and sparkling wines) was less than half that of the fortified varieties (sherries, ports, etc.). By 1968-69 production of table wines had exceeded the volume of fortified varieties and in 1971-72, production of unfortified wines exceeded fortified wines by 9.1 million gallons.

The *Wine Overseas Marketing Act* 1929-1966 was introduced to place the overseas marketing of wine on an orderly basis. The Australian Wine Board, consisting of representatives from wineries and distilleries, grape growers and the Commonwealth Government, supervises the sale and distribution of Australian wine exported and recommends conditions under which export licences should be issued. The Board also engages in wine publicity and trade promotion activities both in Australia and overseas. In London the Board maintains an Australian Wine Centre, which is a medium for promoting interest in Australian wines and brandy. It is also a retail shop for the sale of these products. The *Wine Grapes Charges Act* 1929-1969 provides for the imposition of a levy on all grapes used in Australia for the manufacture of wine, brandy and spirit used for fortifying wine. The proceeds of the levy are used to meet the Board's projects in Australia and overseas and to defray the administrative expenses of the Board, which has no other source of income.

### Production and consumption of wine and brandy

In 1971-72 the total production of wine (beverage and distillation) in Australia was 62.9 million gallons, while total consumption of beverage wine was 25.6 million gallons (2.0 gallons per head of population). Similar particulars for 1970-71 are 55.3 million gallons and 24.4 million gallons (1.9 gallons per head of population) respectively.

WINE: PRODUCTION(a), STATES, 1967-68 TO 1971-72  
(<sup>'000</sup> gallons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
1967-68 . . .	8,350	5,180	31	30,055	829	44,444
1968-69 . . .	8,597	6,241	32	36,186	1,056	52,111
1969-70 . . .	11,529	7,251	31	43,301	1,015	63,127
1970-71 . . .	10,376	6,616	32	37,233	999	55,257
1971-72 . . .	14,569	7,549	26	40,014	772	62,931

(a) Beverage and distillation wine; includes farm wine in New South Wales, Queensland and Western Australia.

BRANDY: PRODUCTION, SOUTH AUSTRALIA  
AND AUSTRALIA, 1967-68 TO 1971-72  
(Proof gallons)

Year	S.A.	Aust.(a)
1967-68 . . . .	715,147	872,428
1968-69 . . . .	848,225	1,068,030
1969-70 . . . .	1,140,010	1,257,781
1970-71 . . . .	1,346,708	1,482,573
1971-72 . . . .	1,450,550	1,633,297

(a) Includes New South Wales and Victoria, for which separate details are not available for publication.

### Exports and imports of wine and brandy

Principal markets for exports of Australian wine are the United Kingdom, Canada and Papua New Guinea. During 1971-72 these countries received 633,000 gallons, 492,000 gallons and 183,000 gallons respectively. Exports of Australian-produced wine and imports of wine for the five years ended 1971-72 are shown in the following table.

## WINE: EXPORTS AND IMPORTS, AUSTRALIA, 1967-68 TO 1971-72

Year	Quantity			Value f.o.b.		
	Sparkling ('000 gals)	Other ('000 gals)	Total ('000 gals)	Sparkling (\$'000)	Other (\$'000)	Total (\$'000)
EXPORTS						
1967-68	88	1,751	1,839	359	2,794	3,153
1968-69	73	1,729	1,802	314	3,081	3,395
1969-70	83	1,212	1,295	348	2,565	2,913
1970-71	87	1,357	1,444	391	3,190	3,581
1971-72	85	1,669	1,754	401	3,844	4,245
IMPORTS						
1967-68	76	226	302	464	899	1,363
1968-69	88	367	455	495	1,387	1,882
1969-70	104	324	428	597	1,325	1,922
1970-71	118	408	526	780	1,801	2,581
1971-72	122	424	546	781	2,114	2,895

During 1971-72 Italy supplied 165,000 gallons valued at \$692,000, Portugal 109,000 gallons valued at \$386,000 and France 73,000 gallons valued at \$916,000.

Exports of Australian-produced brandy in 1971-72 amounted to 76,000 proof gallons, valued at \$416,000. Imports of brandy, mainly from France, amounted to 268,000 proof gallons, valued at \$1,482,000.

**Dried vine fruit industries**

The dry period from November to March in the lower Murray valley makes this an ideal area for dried vine fruit. Harvesting for drying takes place at the end of summer. The sun-drying process is often accelerated by using a dip of cold potash.

The *Dried Fruits Export Control Act 1924-1966*. For details of the *Dried Fruits Export Control Act 1924-1966* see Year Book No. 55, page 877, and earlier issues.

For details of the bulk purchase agreements between the Governments of the United Kingdom and Australia which operated during the period 1946-53 see Year Book No. 40, page 888. From 1 December 1953 exports to the United Kingdom have been on a trader to trader basis.

In June 1963, Australian, Greek and Turkish dried vine fruit interests concluded an agreement to maintain minimum prices for sultanas on world markets. The agreement has been periodically reviewed. At the Ninth Conference in London in June 1971, representatives of the signatory countries (which had included South Africa from 1970) met for the last time as parties to the agreement and formally resolved it out of existence. Despite this it was agreed that contacts between the producing countries would continue and efforts are currently being made to revive formal arrangements for co-operation.

The *Dried Vine Fruits Stabilization Act 1971* (For details of the first Dried Vine Fruits Stabilization Scheme, which expired with the disposal of the 1968 crop, see Year Book No. 55, page 877, and earlier issues). A referendum of eligible dried vine fruit producers was held in September 1971 concerning a new five-year stabilisation plan for the dried vine fruits industry. The result of this referendum was that growers were in favour of the introduction of a new plan. Accordingly, legislation was brought down and received the Royal Assent on 16 December 1971. The plan operates as from the 1971 season for a period of five years.

## DRIED VINE FRUIT: PRODUCTION, STATES, 1967-68 TO 1971-72

(Tons)

Year	N.S.W.		Vic.		S.A.		W.A.		Aust.	
	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants
1967-68	12,119	505	59,222	3,166	5,200	3,112	40	1,668	76,581	8,451
1968-69	7,829	428	37,896	2,687	1,743	2,261	8	1,862	47,476	7,238
1969-70	14,118	651	67,070	3,383	3,169	3,325	8	1,068	84,365	8,427
1970-71	9,240	630	40,585	3,034	1,313	3,150	29	1,489	51,167	8,303
1971-72	14,942	574	70,391	3,193	8,416	3,049	37	1,213	93,786	8,029

(a) Includes sultanas and lexias.



## DRIED VINE FRUIT(a): EXPORTS, AUSTRALIA, 1967-68 TO 1971-72

Year	Raisins, sultanas and lexias		Currants		Total	
	Quantity	Value f.o.b.	Quantity	Value f.o.b.	Quantity	Value f.o.b.
	tons	\$'000	tons	\$'000	tons	\$'000
1967-68 . . .	63,562	19,459	3,907	1,316	67,469	20,775
1968-69 . . .	58,070	18,310	3,437	1,203	61,507	19,513
1969-70 . . .	40,631	13,383	2,793	979	43,424	14,362
1970-71 . . .	54,857	17,194	4,194	1,322	59,051	18,516
1971-72 . . .	50,862	16,120	4,517	1,378	55,379	17,498

(a) Excludes quantities exported as mincemeat.

The chief countries importing Australian dried vine fruit are the United Kingdom, Canada, New Zealand and the Federal Republic of Germany. The quantities exported to these countries in 1971-72 were 19,640 tons, 16,968 tons, 6,547 tons and 3,563 tons respectively.

## Table grapes

Grapes for table use are grown in all States except Tasmania, but the area of this type was only about 7 per cent of the productive area of vines in 1971-72.

## PASTORAL PRODUCTION

## Livestock numbers

A detailed account of the various enumerations of livestock in Australia made prior to 1860 was given on page 748 of Year Book No. 35. Since 1861 annual enumerations have been made, based, with few exceptions, on actual collections made through the agency of the State police or by post. Particulars concerning the numbers of each of the principal kinds of livestock in Australia, at decennial intervals from 1861 to 1961, and from 1968 onwards in single years, are given in the following table, and are shown continuously since 1880 on the graph on plate 45, page 805.

## LIVESTOCK: AUSTRALIA, 1861 TO 1972

('000)

Year	Horses	Cattle	Sheep	Pigs	Year	Horses	Cattle	Sheep	Pigs
1861 .	432	3,958	20,135	351	1941 .	1,666	13,256	122,694	1,797
1871 .	717	4,276	41,594	543	1951 .	999	15,229	115,596	1,134
1881 .	1,069	7,527	62,184	816	1961 .	598	17,332	152,679	1,615
1891 .	1,522	10,300	97,881	891	1968 .	n.a.	19,218	166,912	2,056
1901 .	1,610	8,640	70,603	950	1969 .	n.a.	20,611	174,605	2,253
1911 .	2,166	11,745	98,066	1,026	1970 .	456	22,162	180,080	2,398
1921 .	2,416	13,500	81,796	764	1971 .	n.a.	24,373	177,792	2,590
1931 .	1,793	11,721	110,568	1,072	1972 .	n.a.	27,373	162,910	3,199

While livestock numbers (particularly sheep) have increased substantially since 1861, marked fluctuations have taken place during the period, mainly on account of widespread droughts which have from time to time left their impressions on the pastoral history of Australia. These occurred in 1868, 1877, 1883-84, 1892, 1893, 1895, 1901-2, 1912, 1914, 1918, 1919, 1922-23, 1925-26, 1927-28, 1929-30, 1940-41, 1944-45 to 1946-47, and 1965-67. The years in which the numbers of livestock attained their peaks are as follows: horses, 1919 (2,527,000); cattle, 1972 (27,373,000); sheep, 1970 (180,080,000); and pigs, 1972 (3,199,000).

The distribution throughout Australia of sheep, beef cattle, dairy cattle and pigs at 31 March 1963 is shown in the maps on pages 1049 and 1050 and facing pages 1082 and 1083 of Year Book No. 50.

The numbers of horses, cattle, sheep, and pigs in each State and Territory are shown later in this chapter.

### Value of pastoral production and indexes of quantum and price

Values of pastoral production are shown for 1971-72 in the table following. Further details of values of pastoral production and indexes of quantum and price, together with details of the source of the information and an explanation of the terms used in this compilation will be found in Chapter 29, Miscellaneous.

### GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION: STATES AND TERRITORIES, 1971-72

(\$'000)

<i>State or Territory</i>	<i>Gross production valued at principal markets</i>	<i>Marketing costs</i>	<i>Local value of production</i>	<i>Value of materials used in process of production</i>	<i>Net value of production(a)</i>
New South Wales . . . . .	480,456	48,977	431,479	(b)55,854	375,625
Victoria . . . . .	399,504	46,356	353,148	66,872	286,275
Queensland . . . . .	270,015	26,750	243,265	43,401	199,864
South Australia . . . . .	153,069	9,211	143,858	21,432	122,426
Western Australia . . . . .	199,444	19,571	179,873	23,558	156,315
Tasmania . . . . .	40,700	3,307	37,393	12,422	24,970
Northern Territory . . . . .	23,361	3,570	19,791	..	19,791
Australian Capital Territory . . . . .	1,669	118	1,551	125	1,425
<b>Australia . . . . .</b>	<b>1,568,218</b>	<b>157,860</b>	<b>1,410,358</b>	<b>223,664</b>	<b>1,186,691</b>

(a) No deduction has been made for depreciation and maintenance. (b) No allowance has been made for costs of power, power kerosene, petrol and other oils.

## Sheep

### Distribution throughout Australia

With the exception of a short period in the early eighteen-sixties, when the flocks in Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising. Western Australia is the second largest sheep raising State followed by Victoria. Sheep numbers reached a peak in Australia in 1970. They then declined up to March 1972 as producers turned off large numbers for slaughter and moved from wool-growing towards beef production.

A map showing the distribution of sheep in Australia at 31 March 1963 appears on page 1049 of Year Book No. 50. Graphs showing the number of sheep in Australia from 1880 onwards appear on plates 45 and 46 of this Year Book (pages 805 and 813).

### SHEEP: NUMBERS IN STATES AND TERRITORIES, 1968 TO 1972

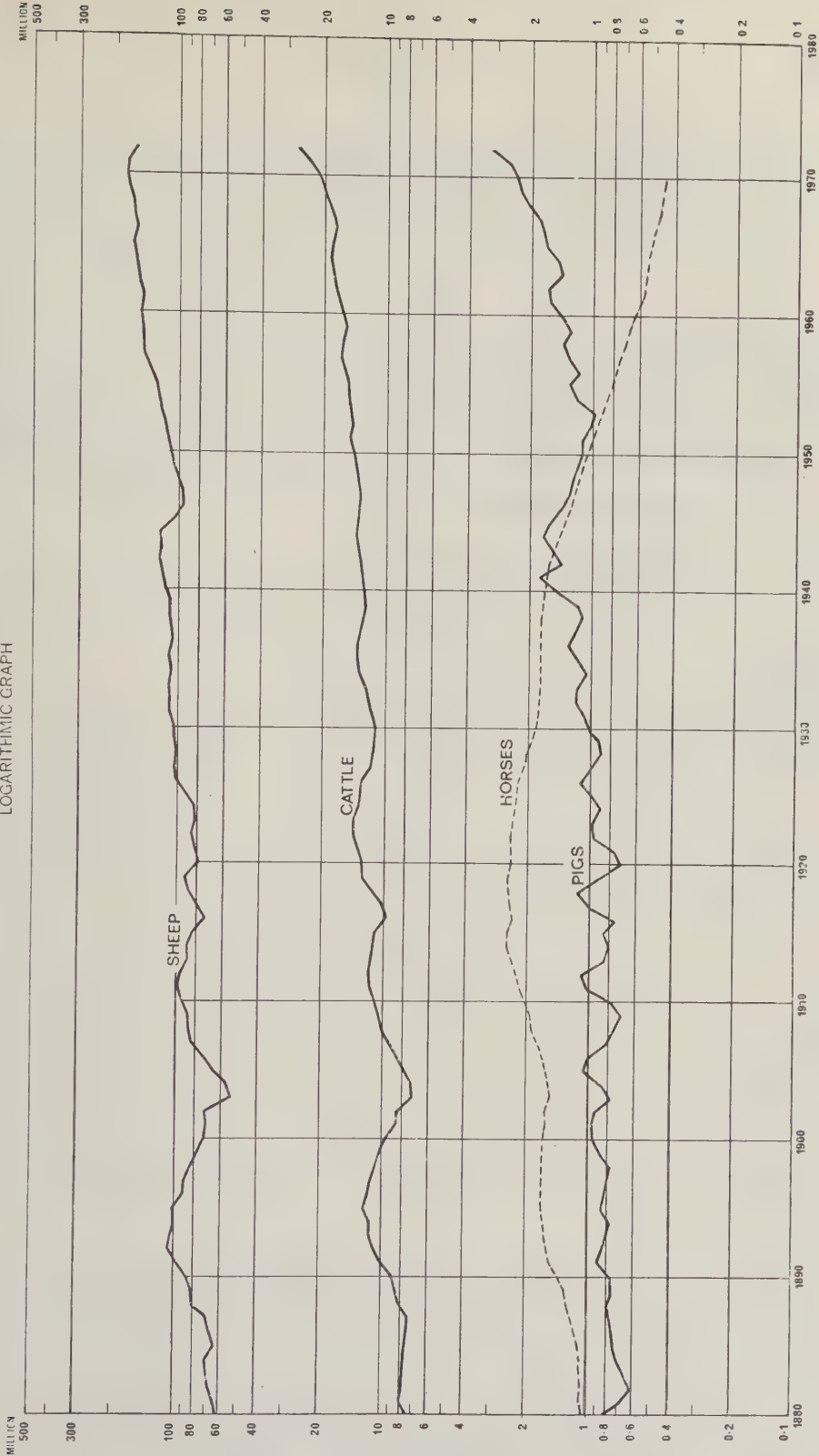
('000)

<i>Year ended 31 March</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1968 . . . . .	67,786	27,909	19,948	16,405	30,161	4,428	9	267	166,912
1969 . . . . .	68,153	30,185	20,324	18,392	32,901	4,395	10	246	174,605
1970 . . . . .	72,284	33,157	16,446	19,747	33,634	4,560	8	244	180,080
1971 . . . . .	70,605	33,761	14,774	19,166	34,709	4,517	9	251	177,792
1972 . . . . .	62,000	29,496	14,604	17,970	34,405	4,237	7	192	162,910

The percentage distribution of sheep and lambs in the several States in 1972 was: New South Wales, 38; Victoria, 18; Queensland, 9; South Australia, 11; Western Australia, 21; and Tasmania, 3.

LIVESTOCK: AUSTRALIA, 1880 TO 1972

LOGARITHMIC GRAPH



NOTE. VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE. ACTUAL NUMBERS ARE INDICATED BY SCALE. SINCE 1967 FIGURES FOR HORSES HAVE BEEN COLLECTED ON A TRIENNIAL BASIS.



## Movement in sheep numbers

**SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA  
1967-68 TO 1971-72**  
(<sup>'000</sup>)

<i>Year ended 31 March</i>	<i>Numbers at beginning of season</i>	<i>Lambs marked</i>	<i>Net exports</i>	<i>Sheep and lambs slaughtered (a)</i>	<i>Estimated deaths on farms (b)</i>	<i>Numbers at close of season</i>
1968 . . . . .	164,237	50,648	362	38,145	9,466	166,912
1969 . . . . .	166,912	51,171	361	35,676	7,441	174,605
1970 . . . . .	174,605	56,784	487	41,045	9,777	180,080
1971 . . . . .	180,080	54,512	768	44,175	11,857	177,792
1972 . . . . .	177,792	51,705	807	52,659	13,121	162,910

(a) Includes an estimate for numbers boiled down. (b) Balance figure; excludes lambs which died before marking.

Comparisons of Australian flock numbers with those of certain other principal sheep-producing countries are given on page 818.

## Classification of sheep according to age, sex, and breed

**SHEEP, BY AGE AND SEX: AUSTRALIA, 31 MARCH 1968 TO 1972**  
(<sup>'000</sup>)

<i>Description</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>	<i>1972</i>
Rams (1 year and over) . . . . .	2,079	2,184	2,200	2,177	2,060
Breeding ewes (1 year and over) . . . . .	77,872	83,607	85,474	84,381	75,611
Other ewes (1 year and over) . . . . .	6,700	6,424	6,483	7,521	9,089
Wethers (1 year and over) . . . . .	42,512	45,178	45,441	45,269	39,777
Lambs and hoggets (under 1 year) . . . . .	37,750	37,212	40,482	38,443	36,374
<b>Total sheep and lambs . . . . .</b>	<b>166,912</b>	<b>174,605</b>	<b>180,080</b>	<b>177,792</b>	<b>162,910</b>

Particulars of the principal breeds of sheep at 31 March 1971 (details are collected on a triennial basis) are shown in the following table.

**SHEEP, BY PRINCIPAL BREED: STATES AND TERRITORIES, 31 MARCH 1971**  
(<sup>'000</sup>)

<i>Breed</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Merino . . . . .	53,017	16,740	14,449	16,304	32,100	402	9	198	133,218
Other recognised breeds . . . . .	5,196	6,679	137	1,244	1,267	2,904	..	11	17,438
Merino comeback(a) . . . . .	1,663	2,199	25	215	363	533	..	8	5,005
Crossbreds(b) . . . . .	10,729	8,144	163	1,403	979	678	..	35	22,131
<b>Total . . . . .</b>	<b>70,605</b>	<b>33,761</b>	<b>14,774</b>	<b>19,166</b>	<b>34,709</b>	<b>4,517</b>	<b>9</b>	<b>251</b>	<b>177,792</b>

(a) Merino comeback is the progeny of a crossbred Merino ewe and a Merino ram, i.e. finer than half-bred. (b) Half bred and coarser.

## Exports and imports of sheep

The movement of sheep to and from Australia is governed under Customs regulations. Exports of both breeding and slaughter sheep are subject to the provision of a permit from the Department of Primary Industry. For most breeds, these permits are freely granted. However, the export of breeding merinos was prohibited in the mid-thirties and this ban has continued on the export of merino ewes, semen and fertilised ova. There has been a partial relaxation on the export of merino rams in recent years, whereby up to 300 merino rams could be purchased for export each year at nominated public auctions. In February, 1973 the Government reimposed the total ban on the export of merinos to any country except New Zealand until a majority of persons affected decide by referendum in favour of removing or relaxing the embargo on the export of merino rams and their semen.

Since June, 1958, there has been a prohibition on the import of sheep to protect the Australian sheep industry from the introduction of exotic diseases, such as 'blue-tongue'.

## Cattle

## Objects of cattle-raising in Australia

Cattle-raising is carried out in all States, the main object in certain districts being the production of stock suitable for slaughtering purposes and in others the raising of profitable dairy herds. While dairy cattle are restricted mainly to coastal districts, beef cattle are more widely distributed in areas such as the tropical area of northern Queensland, the Northern Territory and the Kimberley district in the north of Western Australia. Increasing numbers of beef cattle are being raised in conjunction with sheep.

## Distribution throughout Australia

Although cattle numbers declined after 1957 because of drought conditions and heavy slaughtering, they began to rise again in 1960 and in 1964 reached 19,055,000. Again because of drought in the eastern States, this figure declined to 17,936,000 in 1966. There has been an accelerating increase in the total number of cattle in Australia over the last six years due largely to an increase in the demand for beef. Total cattle numbers in March 1972 were 27.4 million compared with 24.4 million in 1971. Total dairy cattle numbers are currently 3.9 million.

For a graph showing the number of cattle in Australia from 1880 onwards see plate 45 page 805.

**CATTLE NUMBERS IN STATES AND TERRITORIES, 1968 TO 1972**  
(<sup>'000</sup>)

Year ended 31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968 . . .	4,555	3,474	7,361	695	1,427	564	1,130	13	19,218
1969 . . .	4,864	3,878	7,668	865	1,546	586	1,190	14	20,611
1970 . . .	5,637	4,462	7,515	1,026	1,681	646	1,179	15	22,162
1971 . . .	6,494	5,061	7,944	1,196	1,781	733	1,145	18	24,373
1972 . . .	7,410	5,457	9,022	1,495	1,975	829	1,166	20	27,373

Maps showing the distribution of beef and dairy cattle in Australia have been published in previous issues of the Year Book.

## Classification of cattle

**CATTLE CLASSIFIED ACCORDING TO PURPOSE, AGE AND SEX: STATES, 31 MARCH 1972**  
(<sup>'000</sup>)

Classification	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Bulls (1 year and over) used or intended for service—</b>									
Dairy breeds . . . . .	12	31	10	5	3	3	..	..	63
Beef breeds . . . . .	117	76	163	26	35	11	33	..	462
Total . . . . .	129	107	172	31	38	14	33	..	525
Proportion of Aust. total % . .	24.5	20.5	32.8	5.9	7.2	2.6	6.3	..	100.0
<b>Cattle used or intended for production of—</b>									
Milk or cream for sale—									
Cows in milk and dry . . . .	491	1,257	420	145	96	155	..	1	2,565
Heifers—									
1 year and over . . . . .	124	320	104	39	36	37	..	..	660
Calves (under 1 year) . . . .	98	308	79	36	33	36	..	..	591
Milk or cream for use on rural holdings—									
House cows and heifers . . . .	61	21	29	7	6	4	..	..	128
Total . . . . .	773	1,906	633	227	172	232	1	2	3,945
Proportion of Aust. total % . .	19.6	48.3	16.0	5.7	4.3	5.9	..	..	100.0
<b>Cattle for other purposes (a)—</b>									
Cows and heifers (1 year and over) .	3,422	1,702	4,185	667	925	263	699	10	11,873
Calves (under 1 year) (b) . . . .	2,148	1,136	2,003	392	455	226	190	6	6,555
Other (1 year and over) i.e. steers, bullocks, spayed cows, etc. . . . .	938	606	2,027	178	385	95	243	3	4,475
Total . . . . .	6,507	3,444	8,215	1,237	1,765	584	1,132	19	22,903
Proportion of Aust. total % . .	28.4	15.0	35.9	5.4	7.7	2.5	5.0	0.1	100.0
<b>Total cattle and calves for all purposes</b>	<b>7,410</b>	<b>5,457</b>	<b>9,022</b>	<b>1,495</b>	<b>1,975</b>	<b>829</b>	<b>1,166</b>	<b>20</b>	<b>27,373</b>
<b>Proportion of Aust. total % . .</b>	<b>27.1</b>	<b>19.9</b>	<b>32.9</b>	<b>5.5</b>	<b>7.2</b>	<b>3.0</b>	<b>4.2</b>	<b>0.1</b>	<b>100.0</b>

(a) Mainly for meat production.

(b) Includes weaners, and bull calves intended for service.

**CATTLE CLASSIFIED ACCORDING TO PURPOSE, AGE AND SEX: AUSTRALIA, 31 MARCH  
1968 TO 1972**

('000)

<i>Classification</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>	<i>1972</i>
<b>Bulls (1 year and over) used or intended for service—</b>					
Dairy breeds . . . . .	82	77	69	65	63
Beef breeds . . . . .	299	323	363	414	462
<i>Total bulls</i> . . . . .	<i>381</i>	<i>400</i>	<i>432</i>	<i>479</i>	<i>525</i>
<b>Cattle used or intended for production of—</b>					
Milk or cream for sale—					
Cows (in milk and dry) . . . . .	2,794	2,700	2,673	2,601	2,565
Heifers—Springing (within 3 months of calving) and other (1 year and over) . . . . .	755	769	703	687	660
Calves (under 1 year) . . . . .	689	624	631	614	591
Milk or cream for use on rural holdings—					
House cows and heifers . . . . .	169	165	156	145	128
<i>Total cattle, production of milk, etc.</i> . . . .	<i>4,407</i>	<i>4,258</i>	<i>4,164</i>	<i>4,047</i>	<i>3,945</i>
<b>Cattle for other purposes(a)—</b>					
Cows and heifers (1 year and over) . . . . .	7,450	8,333	9,249	10,370	11,873
Calves (under 1 year) (b) . . . . .	3,868	4,218	4,805	5,669	6,555
Other (1 year and over), i.e. steers, bullocks, spayed cows, etc. . . . .	3,113	3,403	3,512	3,808	4,475
<i>Total cattle, other purposes</i> . . . . .	<i>14,431</i>	<i>15,954</i>	<i>17,566</i>	<i>19,847</i>	<i>22,903</i>
<b>Total cattle and calves for all purposes</b> . . . . .	<b>19,218</b>	<b>20,611</b>	<b>22,162</b>	<b>24,373</b>	<b>27,373</b>

(a) Mainly for meat production.

(b) Includes vealers, and bull calves intended for service.

### Exports and imports of cattle

In 1971-72 the number of cattle exported was 3,081, valued at \$855,000 (1970-71, 1,672 valued at \$288,000). Prior to June 1958 small numbers of cattle were imported, consisting mainly of valuable animals for stud purposes. Since that date an embargo has been imposed on the import of cattle in order to prevent the introduction of the disease 'blue-tongue'.

### Comparison with other countries

The following table shows the number of cattle in Australia and in some of the principal cattle-raising countries of the world at the latest available date.

#### CATTLE: NUMBERS IN VARIOUS COUNTRIES

*Source (for countries other than Australia): World Agricultural Production and Trade, United States Department of Agriculture*  
( '000)

<i>Country</i>	<i>Year and month</i>	<i>Number p</i>
India(a) . . . . .	1962 (May) . . . . .	236,000
United States of America . . . . .	1972 (January) . . . . .	117,862
U.S.S.R. . . . .	1972 (January) . . . . .	102,434
Brazil . . . . .	1970 (December) . . . . .	95,268
China, Peoples Republic of(a) . . . . .	1971 (December) . . . . .	92,550
Argentina . . . . .	1972 (June) . . . . .	52,312
Pakistan(a) . . . . .	1961 (Estimate) . . . . .	30,300
<b>Australia</b> . . . . .	<b>1972 (March)</b> . . . . .	<b>27,373</b>
Ethiopia . . . . .	1971 (Estimate) . . . . .	26,310
Mexico . . . . .	1972 (December) . . . . .	26,081
France . . . . .	1972 (October) . . . . .	21,746
Colombia . . . . .	1972 (October) . . . . .	20,960
Turkey(a) . . . . .	1972 (December) . . . . .	14,001
Germany, Federal Republic of . . . . .	1972 (December) . . . . .	13,638
United Kingdom . . . . .	1972 (December) . . . . .	12,928
South Africa, Republic of . . . . .	1972 (June) . . . . .	10,247

(a) Includes buffaloes.



## Horses

The number of horses on rural holdings in Australia reached a peak of 2,527,000 in 1919. Since then it has declined, because of mechanisation of transport and farming, and the number recorded at 31 March 1970 was 456,000. From 1970 particulars of horses, on a Commonwealth basis, are collected only at decennial intervals in accordance with the world census by FAO.

A graph showing the number of horses in Australia since 1880 appears on plate 45, page 805.

### HORSES: NUMBERS IN STATES AND TERRITORIES, 1930 TO 1970

('000)

31 March—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1930 . . .	535	393	500	189	160	34	34	1	1,846
1940 . . .	535	326	445	190	139	30	33	1	1,699
1950 . . .	342	200	317	83	59	21	33	1	1,057
1960 . . .	204	81	234	30	41	11	38	1	640
1970 . . .	136	53	173	16	29	6	41	1	456

### Overseas trade in horses

Exports of Australian-bred horses in 1971-72 numbered 1,372, valued at \$2,908,000, made up of horses for breeding (212 valued at \$404,000), horses for racing (852 valued at \$2,330,000, shipped principally to Singapore, Indonesia, Hong Kong, the United States of America and New Zealand), and horses for other purposes (308 valued at \$174,000). Horses imported into Australia in 1971-72 (1,163 valued at \$4,347,000) were mainly from New Zealand and the United Kingdom.

## Pastoral products: wool

With about one-sixth of the world's woolled sheep, Australia produces almost one-third of the world's wool and more than half the world's fine-quality Merino wool. More than 90 per cent of the production is exported, mainly as greasy wool, although substantial amounts of scoured and carbonised wool, wool on sheep skins and small quantities of semi-manufactured wool are also shipped. The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the table on page 818.

### Wool marketing

Details of past wool marketing schemes and agreements, including the 1914-18 War Imperial Purchase Scheme, the British Australian Wool Realization Association Ltd, the 1939-45 War Acquisition Scheme, Joint Organization, and the Reserve Price Plans of 1951 and 1965, are given in previous issues of the Year Book.

Between 80 and 90 per cent of the Australian wool clip is disposed of at auction. (During both world wars, however, auction selling was suspended and replaced by bulk purchase schemes). There are fourteen recognised wool-selling centres, namely Sydney, Goulburn, Newcastle, Albury, Melbourne, Geelong, Ballarat, Portland, Brisbane, Adelaide, Fremantle, Albany, Hobart, and Launceston. At these centres wool-selling brokers operate large stores where wool received from growers is held awaiting sale.

Each year a wool-selling program is drawn up by the Joint Wool Selling Organisation representing wool growers, selling brokers and wool-buyers on the basis of the expected clip. Selling dates and the quantities to be offered are then determined for each centre. Before each sale the selling brokers, who act as agents for the wool-growers, display a representative portion of the wool to be sold on show floors for buyers' inspection and valuation. Auction sales are attended by buyers purchasing on behalf of wool users in more than fifty countries.

The balance of the clip is sold mainly through private sale, that is, after direct negotiation between the grower and the buyer. Since September 1971 a further alternative, sale by tender, has been available using the principle of sealed bidding. Companies engaged in this activity employ objective measurement techniques for wool, which can allow substantial savings in handling costs over traditional methods of wool selling by auction.

### Wool marketing Committee of Enquiry

Details of this enquiry and its findings are included in previous issues of the Year Book.

### The Australian Wool Industry Conference

This body was formed by woolgrowers in October 1962 to meet the need for an organisation with sufficient authority to speak on behalf of the woolgrowing industry as a whole. It is not a statutory body and consists of twenty-five members each from the Australian Woolgrowers' and Graziers' Council and the Australian Wool and Meat Producers' Federation. The fifty member conference is presided over by an independent chairman.

The Conference makes recommendations to the Commonwealth Government on policy matters concerning the wool industry. Under the Wool Industry Act it is the responsibility of the Conference to nominate woolgrower representatives for appointment to the Australian Wool Board. Under the Wool Tax Acts (*see* page 581) the Conference is also responsible for recommending to the Commonwealth Government what rates of levy should be paid by woolgrowers to finance the activities of the Wool Corporation and the wool research program.

In March 1972 the Conference put to the Government a proposal for:

- (i) a revised structure for the management of the industry's affairs through the amalgamation of the Australian Wool Board and the Australian Wool Commission into a single wool authority, and
- (ii) an integrated marketing system, involving a plan for acquisition of the Australian clip and influencing all of the activities bringing wool from the raw material stage to the ultimate consumer.

#### **Committee on Wool (Randall Committee)**

In October 1971 the Government appointed a committee chaired by Sir Richard Randall, former permanent head of the Treasury, to report on the situation and outlook of the Australian Wool Industry. The report of the Committee on these matters was presented to the Prime Minister on 16 May 1972.

Following the submission by the Australian Wool Industry Conference in March 1972, *see* above, the Committee was asked to examine this proposal. The Committee presented the final report on this examination on 29 May 1972.

A report on all the investigations and findings of the Committee was released publicly in August 1972. On the A.W.I.C. proposal the Committee viewed the first part favourably but considered that some aspects of the acquisition proposal needed further clarification.

#### **Australian Wool Corporation**

Following the Australian Wool Industry Conference submission and the report of the Randall Committee (*see* above) the Australian Wool Corporation was established under the *Wool Industry Act* 1972 and came into operation on 1 January 1973. The Corporation took over the functions of both the Australian Wool Board and the Australian Wool Commission which ceased to operate on that date.

The Corporation consists of nine members, including a full time Chairman. The Chairman is appointed for a period of five years with the other part-time members being appointed for a period of three years. Of the eight other members, four represent Australian woolgrowers, one represents the Commonwealth Government and three are members with special qualifications who have experience in the marketing, processing or manufacture of wool or wool products, or in commerce, finance, economics or science. All members, including the Chairman are appointed by the Minister for Primary Industry, the woolgrower representatives on the nomination of the A.W.I.C. and the three members with special qualifications after consultation with the A.W.I.C.

The functions of the Australian Wool Corporation, which were inherited almost directly from the Wool Commission and Wool Board relate to Wool Marketing, Wool Use Promotion, Wool Testing, Wool Research and the Management of Wool Stores. At its first meeting on 5 January 1973, the Corporation established a group to investigate wool marketing including the proposals for acquisition.

Funds for the Corporation's activities other than its reserve price functions are provided by both woolgrowers, through a levy on shorn wool proceeds (*see* below), and the Commonwealth. Reserve price activities are supported by an administrative levy on wool sold at auction, with funds for wool trading activities coming from accumulated funds inherited from the Australian Wool Commission, and from credit facilities established with the trading banks.

#### **Australian Wool Board**

The Australian Wool Board which was constituted under the *Wool Industry Act* 1962-1970 ceased to function on 1 January 1973 when the Australian Wool Corporation (*see* above) commenced operations.

For details of the Australian Wool Board *see* Year Book No. 58, page 800.

#### **Wool levy**

Since 1936 a statutory levy has been collected from woolgrowers to finance wool promotion activities. The initial rate of 5c a bale was increased at the request of woolgrowers to 20c a bale in 1945 and 40c a bale in 1952, the latter rate continuing until 1960. Further details regarding the operation of this levy prior to 1957 appear in Year Book No. 48, page 978.

Under legislation passed in 1957 provision was also made for the payment by woolgrowers of a contribution for wool research which was fixed at 20c a bale. In 1960 the wool promotion levy was raised to 50c a bale, and the following year it was increased further to \$1 a bale. The operation of this rate was subsequently extended for 1962-63 and 1963-64.

On 1 July 1964 the basis for collecting the woolgrowers' combined levy for wool promotion and research was changed from a flat rate per bale to a percentage deduction from the gross value of shorn wool sold. A maximum rate of 2 per cent was fixed, but provision was made for a lower rate to be prescribed, if appropriate. For 1964-65 the rate was set at 1.875 per cent, which involved a substantial increase in payments by woolgrowers for promotion (from \$1 per bale to the equivalent of about \$2.70 per bale), while the research component of the levy was left unaltered at 20c per bale. In 1965-66 the levy was set at 2 per cent and it remained at the maximum rate till 1969-70. From 1 August 1970, the rate of levy was reduced to 1 per cent.

Following agreement between the Australian Wool Industry Conference and the Government on overall funding of wool research and promotion activities, the rate of the levy for the triennium beginning 1 July 1973 has been set at 2.4 per cent of gross proceeds of shorn wool. This rate includes, however, a loading for administrative expenses of the Wool Corporation in its reserve price activities.

The imposition and collection of the combined levy from woolgrowers is governed by six complementary Acts, the Wool Tax Acts (Nos 1 to 5) 1964 and the *Wool Tax Administration Act* 1964-1966.

#### **Commonwealth Government's contributions to wool research and promotion**

In 1945 the Commonwealth Government commenced contributing on a statutory basis to wool research. Initially the contribution was at the rate of 20c a bale, but this was doubled in 1957 to 40c a bale. At this rate the Commonwealth Government contributed about \$2 million to wool research in 1965-66, and a similar sum was provided in 1966-67.

Prior to 1964-65 the Commonwealth Government had not contributed to wool promotion. However, following representations made by the Australian Wool Industry Conference, the Commonwealth Government undertook to provide assistance to the Australian Wool Board in financing its commitment to the greatly expanded wool promotion program of the International Wool Secretariat. The expanded wool promotion program, announced by the Secretariat, envisaged an increase in the Wool Board's annual contribution to overseas wool promotion campaigns from the then level of \$5 million to about \$20 million.

From 1 July 1964 the Commonwealth Government undertook to match on a \$1 for \$1 basis any increase in contributions by woolgrowers for wool promotion in excess of the levy of \$1 a bale then in force, and the Wool Industry Conference agreed to increase the growers' levy to the equivalent of about \$2.70 a bale, which resulted in a Commonwealth commitment of about \$1.70 a bale. In aggregate this commitment entailed a Commonwealth contribution for promotion of about \$8 million a year. This arrangement operated until 30 June 1967.

During 1967 the Wool Industry Act was amended following negotiations between the Executive of the Australian Wool Industry Conference and the Government. The amendment provided for a Government contribution for wool research and promotion during the three years 1967-68 to 1969-70 on a \$1 for \$1 basis matching woolgrowers' contribution by levy, to a maximum of \$14 million in any one year. It provided for the grower levy and the Government grant to be apportioned annually between wool research and promotion by the Minister for Primary Industry after considering the recommendations of the Australian Wool Industry Conference. No change occurred in the legislation providing for the payment by woolgrowers of a levy at a rate not exceeding two per cent per annum.

When arrangements for Government financial support for wool research and promotion expired on 30 June 1970, the Government increased its contributions for these activities to an average of \$27 million a year for each of the three years 1970-71 to 1972-73. At the same time, as mentioned above, the levy on woolgrowers was reduced from 2 per cent to 1 per cent of the gross proceeds from the sale of shorn wool.

#### **Australian Wool Marketing Corporation Pty Ltd.**

The functions of this body, which began actual operations on 1 July 1970 were taken over by the Australian Wool Commission (see below) in November 1970. For details of the Marketing Corporation see previous issues of the Year Book.

#### **The Australian Wool Commission**

The Australian Wool Commission was established in November 1970 under the *Australian Wool Commission Act* 1970 to operate a flexible reserve price scheme for wool sold at auction and to perform a number of other functions aimed at improving the marketing of Australian wool.

It ceased to operate from 1 January 1973 when its functions were taken over by the Australian Wool Corporation (see page 810). For details of the Australian Wool Commission see Year Book No. 58, pages 802-3.

The working capital needed by the Commission (to purchase wool under its flexible reserve price scheme, to make advances to woolgrowers, etc.) was provided in the form of loans by the Commonwealth Government and by trading banks. The Commonwealth guaranteed loans made by trading banks to the Commission. All monies advanced to the Commission for this purpose were repaid from trading activities prior to its ceasing activities. In 1971-72 the Commission recorded a net trading profit of over \$10 million.



Under the Act, the operating costs of the Commission were met jointly by woolgrowers and the Commonwealth Government. The Government provided half of the funds required for the rehandling and brokers' administration charges for the elimination of small lots under the Price Averaging Plan, and was to meet any losses that may result from time to time on the resale of wool purchased by the Commission. The balance of the operating costs of the Commission were met by woolgrowers. Administrative expenses incurred by the Commission in operating the reserve price scheme were met by a levy on wool sold at auction. For 1971-72 this levy was 0.45 per cent of gross proceeds. From 1 July 1972 the rate was set at 0.40 per cent.

#### **Emergency financial assistance for woolgrowers**

In the 1970-71 Budget an amount of up to \$30 million was provided for emergency assistance to woolgrowers to offset to some extent the decline in wool income resulting from the drastic slump in wool prices between 1968-69 and 1969-70. About \$21.5 million was paid out in grants to over 21,000 woolgrowers during 1970-71 and 1971-72.

#### **Wool Deficiency Payments Scheme**

This scheme was introduced to give woolgrowers a guaranteed price for the 1971-72 wool selling season for all but specified low price low grade wools comprising the bottom 10 per cent of the clip. A deficiency percentage rate is calculated each week which, when applied to the gross sale price of all wool sold, brings the price up to the equivalent of an average for the whole Australian clip over the full season of 79.37 cents per kilo greasy. Payments to producers of wool are made by the Australian Wool Commission on behalf of the Commonwealth through wool brokers and merchants and other persons registered under the *Wool (Deficiency Payments) Act 1971*. More than \$52 million was paid out under this scheme in 1971-72. The scheme was extended to cover the 1972-73 season on the same basis but without excluding any inferior wools. No payments are expected in respect of wool sold in 1972-73.

#### **Objective measurement of Wool**

In 1969 the Australian Wool Board, through its Objective Measurement Technical Committee and Objective Measurement Policy Committee, began investigations into the objective measurement of wool and the significance of this development for the marketing of the Australian wool clip.

In 1970 the Commonwealth Government provided \$1.5 million for work on research and implementation of objective measurement techniques.

The findings of the Committees were presented to the Board in December 1972, and point to significant changes from the traditional processes involved in every stage of the marketing process. Savings of several dollars per bale could be achieved in the marketing of wool, especially through the separation of handling and selling centres for wool. The Committee noted that further refinements and developments in techniques would occur. The Department of Primary Industry is setting up a monitoring body, as recommended by the committee to ensure the maintenance of standards and accuracy in measurement of wool.

#### **Wool production**

Wool as shorn from the sheep contains an appreciable amount of grease, dirt and other extraneous matter, and is termed 'greasy wool'. The quantity of grease and other matter in a fleece differs not only between countries, but between districts in the same country. It fluctuates with the vagaries of the season, and with the breed and the condition of the sheep. To allow for this factor, the weight of greasy wool is sometimes given on a 'clean' basis, i.e. minus the estimated amount of impurities. The net wool fibre content of greasy wool, expressed as a percentage, is termed 'clean yield'.

From 1946-47 to 1952-53 the Australian Wool Realisation Commission, and from 1953-54, the Wool Statistical Service, have assessed annually the clean yield of the Australian wool clip. During the period of assessment the clean yield showed a continuous rise up to 1951-52, when it reached 57.5 per cent. It has since fluctuated between 55.7 per cent and 57.7 per cent. It was 56.9 per cent in 1971-72.

Wool scoured, washed and carbonised in Australia before export, however, has a somewhat lower clean yield than the whole clip, because the grade of greasy wool treated locally for export as scoured, washed or carbonised contains quantities of dirty and low-grade wool. The quantity of scoured and carbonised wool exported during 1971-72 was about 7.9 per cent of total raw wool exports in terms of greasy. For the clean yield of Australian scoured wools exported a standard factor of 93 per cent has been adopted.

The production of wool in the States and Territories varies broadly in accordance with the number of sheep depastured and with seasonal conditions which affect clip per head (see page 814). In general, however, South Australia obtains from its large-framed merinos a much heavier fleece per sheep than the Australian average. In addition, as a result of better management (improved pastures, fodder conservation, better breeding, control of diseases, etc.), the long-term trend has been towards higher fleece weights.

The following table shows details of total wool (i.e. shorn, dead and fellmongered, and exported on skins) produced by each of the States and Territories during the years 1967-68 to 1971-72. A graph showing the production of wool in relation to sheep numbers from 1880 onwards appears on plate 46 below.

**PRODUCTION OF WOOL (GREASY BASIS): STATES AND TERRITORIES, 1967-68 TO 1971-72**  
(<sup>'000</sup> kg)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	295,029	150,788	102,886	99,316	136,183	17,376	51	1,015	802,643
1968-69	305,512	165,267	112,041	108,011	170,394	21,299	50	934	883,506
1969-70	340,125	193,779	89,065	124,741	152,624	21,861	50	1,159	923,405
1970-71	314,317	195,444	76,554	117,537	158,969	21,671	36	1,000	885,528
1971-72	281,759	192,449	83,160	117,922	178,162	21,063	24	822	875,361

The bulk of the Australian wool production (about 90 per cent in recent years) is shorn from live sheep. The remainder is obtained by fellmongering (less than one per cent) or is exported on skins (about 9 per cent). The following table shows details of total wool production according to method of obtaining wool, and also the gross value of wool produced. Gross value is based, for shorn wool, upon the average price realised for greasy wool sold at auction and, for skin wools, on prices recorded by fellmongers and skin exporters.

**QUANTITY (GREASY BASIS) AND VALUE OF WOOL PRODUCED**  
**AUSTRALIA, 1967-68 TO 1971-72**

Year	Shorn (including crutchings)	Dead and fell- mongered	Exported on skins	Total production	
				Quantity	Value
	<sup>'000</sup> kg	<sup>'000</sup> kg	<sup>'000</sup> kg	<sup>'000</sup> kg	<sup>\$</sup> '000
1967-68	728,049	10,861	63,734	802,643	709,524
1968-69	804,328	11,441	67,737	883,506	838,651
1969-70	839,084	10,057	74,264	923,405	735,233
1970-71	801,168	7,818	76,540	885,528	537,504
1971-72	776,969	8,133	90,258	875,361	663,668

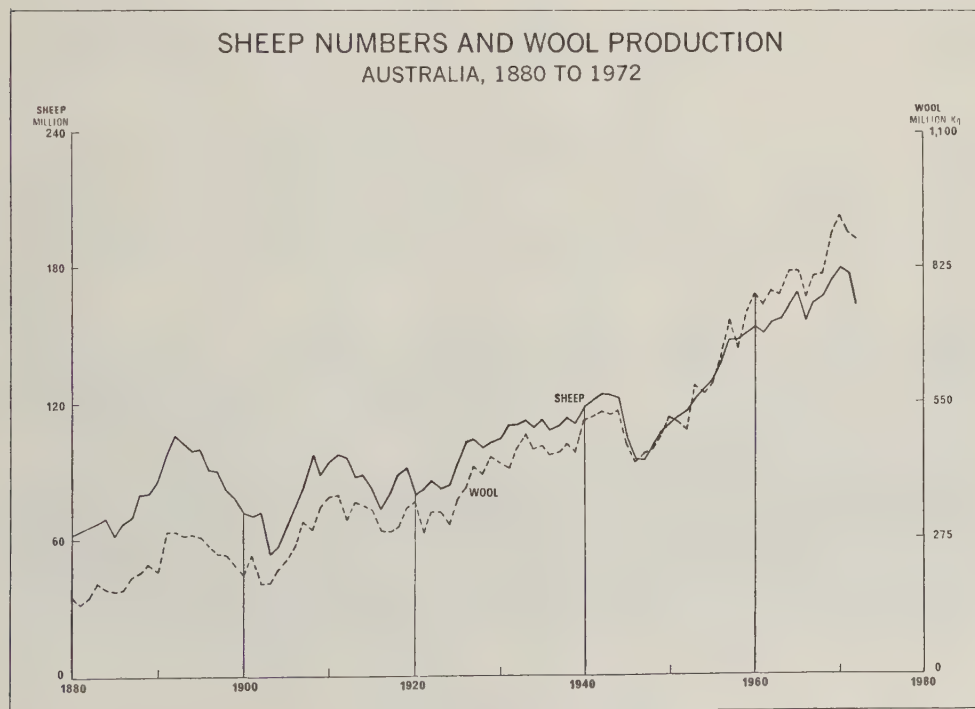


PLATE 46

## Average fleece weight

**AVERAGE WEIGHT OF FLEECES SHORN (SHEEP AND LAMBS)**  
**STATES AND TERRITORIES, 1967-68 TO 1971-72**  
 (kg)

State or Territory	Sheep					Lambs				
	1967-68	1968-69	1969-70	1970-71	1971-72	1967-68	1968-69	1969-70	1970-71	1971-72
N.S.W. . . .	4.48	4.56	4.93	4.55	4.36	1.43	1.61	1.62	1.61	1.55
Vic. . . . .	4.12	4.44	4.84	4.67	4.52	1.16	1.34	1.37	1.39	1.36
Qld . . . . .	4.82	5.10	4.69	4.69	4.99	1.85	1.96	1.92	2.05	2.16
S.A. . . . .	5.55	6.08	6.27	5.69	6.00	1.53	1.78	1.86	1.75	1.85
W.A. . . . .	4.79	5.31	4.70	4.68	5.10	1.34	1.57	1.35	1.38	1.57
Tas. . . . .	3.91	4.81	4.85	4.67	4.70	1.03	1.20	1.15	1.19	1.26
N.T. . . . .	4.94	4.89	4.89	4.29	6.00	..	..	..	..	..
A.C.T. . . .	3.93	3.87	5.12	4.26	4.13	0.74	0.75	0.82	0.95	1.22
<b>Aust. . . .</b>	<b>4.59</b>	<b>4.90</b>	<b>4.99</b>	<b>4.74</b>	<b>4.78</b>	<b>1.40</b>	<b>1.59</b>	<b>1.55</b>	<b>1.54</b>	<b>1.58</b>

## Classification of wool according to quality

The following table provides a detailed analysis of wool sold at auction, according to quality, for the 1971-72 season. These data are compiled by the Wool Corporation on the basis of catalogues of auction sales. 'Quality' is a measure of the fineness and texture of wool for spinning purposes.

**CLASSIFICATION OF GREASY WOOL SOLD AT AUCTION(a): AUSTRALIA**  
**1971-72 SEASON**

(Bales of approximately 136 kg)

Predominating quality (mean microns)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
19 and finer . . . . .	89,236	32,331	3,166	159	973	6,113	131,978
20-21 . . . . .	299,344	245,071	83,257	27,751	144,181	6,322	805,926
22-23 . . . . .	529,126	410,619	312,250	211,553	434,411	23,666	1,921,625
<b>Total, 23's and finer . . . . .</b>	<b>917,706</b>	<b>688,021</b>	<b>398,673</b>	<b>239,463</b>	<b>579,565</b>	<b>36,101</b>	<b>2,859,529</b>
24-25 . . . . .	116,679	244,701	65,732	239,927	182,433	39,283	888,755
26-27 . . . . .	76,508	181,823	9,540	100,884	69,903	23,459	462,117
28-32 . . . . .	99,039	166,382	3,850	30,571	18,498	18,639	336,979
33 and coarser . . . . .	39,156	77,475	1,597	6,503	5,328	8,718	138,777
Oddments . . . . .	24,168	22,564	14,760	8,323	26,146	2,347	98,308
<b>Grand total . . . . .</b>	<b>1,273,256</b>	<b>1,380,966</b>	<b>494,152</b>	<b>625,671</b>	<b>881,873</b>	<b>128,547</b>	<b>4,784,465</b>

(a) All greasy wool sold at auction except 'wool re-offered account buyer.'

## Price and value

During 1971-72 the price of greasy and scoured wool sold in the selling centres of Australia averaged 75.25c per kg compared with the average price of 64.68c per kg in 1970-71 and 82.78c per kg in 1969-70. These prices are as compiled by the National Council of Wool Selling Brokers and represent the average price realised for all greasy and scoured wool, of whatever type or quality, marketed during the years indicated.

Fluctuation in Australian wool prices has a marked effect on the nation's rural and national income. In 1945-46 the gross value of wool production was \$117,194,000, representing 17.4 per cent of the gross value of production of all rural industries, while in 1950-51, when prices reached a peak, wool was valued at \$1,303,804,000 or 55.6 per cent of the total value of production for all rural industries. The value of wool production fluctuated considerably in subsequent years. In 1971-72 it was \$660,456,000 or 16.0 per cent of the gross value of production of rural industries.



**ESTIMATED GROSS VALUE OF TOTAL WOOL PRODUCTION(a)  
STATES AND TERRITORIES, 1967-68 TO 1971-72**  
(\$'000)

<i>Season</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1967-68	265,527	133,213	94,874	79,925	119,146	15,609	41	1,189	709,524
1968-69	296,005	155,547	108,060	95,054	161,589	21,180	38	1,178	838,651
1969-70	275,385	154,693	69,783	91,224	124,829	18,081	30	1,208	735,233
1970-71	198,688	118,123	44,916	65,525	94,510	14,983	17	742	537,504
1971-72	222,598	134,514	61,732	85,701	137,269	18,001	13	628	660,456

(a) Includes shorn, dead and fellmongered wool and wool exported on skins.

### Stocks of wool

Stocks of raw wool held in Australia at 30 June 1972 amounted to 205.8 million kg (greasy basis) of which 33.1 million kg (18.5 million kg as greasy and 14.6 million kg as scoured and carbonised) was held by woollen mills, wool scourers and fellmongers, and 172.7 million kg, assumed to be all greasy, was held by brokers and dealers. Of the wool held by brokers and dealers 53.2 million kg was unsold wool and 119.5 million kg was sold wool held awaiting shipment. These stocks exclude wool on skins, since this wool is not recorded as production until fellmongered in Australia or exported on skins.

### Consumption of wool

Statistics of raw wool consumption published in recent years for the purposes of broad international comparisons are based on the quantities of scoured or carbonised wool used on the woollen and worsted systems (mill consumption), plus quantities used in such processes as felting. Consumption estimates compiled on this basis have obvious defects, as they disregard overseas trade in semi-processed wool (e.g. tops and yarns) as well as woollen goods. Estimates of raw wool used on the woollen and worsted systems and by felt manufacturers in Australia are shown in the following table for the years 1967-68 to 1971-72.

**ESTIMATED CONSUMPTION OF RAW WOOL: AUSTRALIA, 1967-68 TO 1971-72**  
('000 kg)

<i>Year</i>	<i>Greasy basis</i>			<i>Clean equivalent</i>		
	<i>Used on woollen and worsted systems</i>	<i>Used for felt manufacture (including hats)</i>	<i>Total</i>	<i>Used on woollen and worsted systems</i>	<i>Used for felt manufacture (including hats)</i>	<i>Total</i>
1967-68	58,242	1,148	59,390	33,132	545	33,677
1968-69	58,718	1,148	59,866	33,402	545	33,948
1969-70	59,459	1,148	60,606	33,824	545	34,369
1970-71	60,904	1,148	62,052	34,646	545	35,191
1971-72	58,822	1,148	59,970	33,462	545	34,007

As considerable quantities of tops, noils and yarn are exported from Australia, the series on raw wool consumption shown above is over-stated to this extent. The series 'Estimated consumption of processed wool in Australia' provides a more reliable indication of wool consumption in Australia, as allowance has been made for exports of wool in semi-processed form. This series is shown in the following table for the years 1967-68 to 1971-72. Briefly, the series measures consumption of wool in terms of yarn used in Australian mills and other factories to produce woollen cloth and other woollen goods, yarn used for hand knitting purposes, and scoured wool used for felt manufacture. No allowance has been made for overseas trade in woollen piece goods, clothing, etc., because of the obvious difficulties of estimating accurately the wool content of these products.

**ESTIMATED CONSUMPTION OF PROCESSED WOOL: AUSTRALIA  
1967-68 TO 1971-72  
(<sup>'000</sup> kg)**

Year	Greasy basis				Clean equivalent			
	Worsted yarn used (a)(b)	Woollen yarn used (b)	Scoured wool used for felt manufacture (including hats)	Total	Worsted yarn used (a)(b)	Woollen yarn used (b)	Scoured wool used for felt manufacture (including hats)	Total
1967-68 .	18,249	16,872	1,148	36,269	10,166	10,282	545	20,992
1968-69 .	17,600	16,576	1,148	35,323	9,798	10,100	545	20,443
1969-70 .	18,372	18,165	1,148	37,685	10,243	11,070	545	21,857
1970-71 .	19,564	19,158	1,148	39,870	10,907	11,675	545	23,127
1971-72p.	19,585	19,825	1,148	40,558	10,907	12,081	545	23,533

(a) Includes hand knitting yarns used. (b) Includes wool content of yarns containing a mixture of wool and other fibres.

**Quantities of wool exported**

Of the total shipments of greasy and slipe wool in 1971-72, 41 per cent went to Japan, 11 per cent to France, 8 per cent to Italy, 8 per cent to the Federal Republic of Germany, 5 per cent to the United Kingdom and 4 per cent to Belgium-Luxembourg.

**EXPORTS OF GREASY AND SLIPE WOOL: AUSTRALIA, 1967-68 TO 1971-72  
(<sup>'000</sup> kg actual weight)**

Country of consignment	1967-68	1968-69	1969-70	1970-71	1971-72
Belgium-Luxembourg . . . . .	43,515	38,355	38,768	44,145	27,472
France . . . . .	54,722	59,320	60,415	62,343	78,346
Germany, Federal Republic of . . . . .	45,733	43,944	46,087	46,118	52,036
India . . . . .	9,780	15,435	19,152	16,916	15,223
Italy . . . . .	55,845	59,275	61,556	42,451	52,327
Japan . . . . .	225,931	240,612	258,235	254,684	285,239
Poland . . . . .	16,119	15,631	15,343	12,711	18,355
Taiwan . . . . .	5,420	10,147	12,345	14,226	15,692
United Kingdom . . . . .	65,133	52,552	62,620	34,173	33,011
U.S.S.R. . . . .	20,932	28,131	30,570	38,796	21,328
Yugoslavia . . . . .	8,965	8,529	12,069	16,655	8,671
Other . . . . .	80,393	95,311	95,615	67,494	81,605
<b>Total . . . . .</b>	<b>632,490</b>	<b>667,241</b>	<b>712,776</b>	<b>650,711</b>	<b>689,305</b>

**EXPORTS OF SCOURED AND WASHED, AND CARBONISED WOOL: AUSTRALIA  
1967-68 TO 1971-72  
(<sup>'000</sup> kg actual weight)**

Country of consignment	1967-68	1968-69	1969-70	1970-71	1971-72
Canada . . . . .	2,307	999	1,242	956	911
France . . . . .	1,108	1,055	616	1,061	1,622
Germany, Federal Republic of . . . . .	3,923	3,072	2,448	3,800	3,619
Hong Kong . . . . .	1,220	2,064	1,972	1,799	1,458
Iran . . . . .	2,145	1,865	2,214	1,896	3,117
Italy . . . . .	3,950	3,372	3,780	3,529	4,840
Japan . . . . .	1,793	1,653	1,680	968	1,443
Korea, Republic of . . . . .	827	1,222	1,077	729	759
Taiwan . . . . .	449	685	1,445	2,182	1,063
United Kingdom . . . . .	8,587	6,128	6,056	6,104	5,823
United States of America . . . . .	8,336	8,646	6,514	2,550	1,020
U.S.S.R. . . . .	1,667	3,512	6,966	1,046	10,246
Other . . . . .	4,529	4,461	4,964	6,172	6,122
<b>Total . . . . .</b>	<b>40,841</b>	<b>38,734</b>	<b>40,973</b>	<b>32,791</b>	<b>42,043</b>

**EXPORTS OF CARDED OR COMBED WOOL, NOILS AND WOOLWASTE: AUSTRALIA**  
**1967-68 TO 1971-72**  
('000 kg actual weight)

	1967-68	1968-69	1969-70	1970-71	1971-72
Carded or combed—Tops . . .	10,304	10,943	9,940	8,892	9,949
Other . . . . .	..	3	4	14	90
Noils . . . . .	1,763	1,536	1,183	1,367	1,453
Waste . . . . .	1,304	1,026	1,012	1,455	2,545

The following table shows the estimated greasy weights of exports of raw and semi-processed wool for the years 1967-68 to 1971-72. As the figures in the following table are expressed on a 'greasy' basis, they differ from those in the preceding tables which represent actual weight shipped.

**EXPORTS OF WOOL—GREASY BASIS: AUSTRALIA**  
**1967-68 TO 1971-72**  
('000 kg)

	1967-68	1968-69	1969-70	1970-71	1971-72
Raw wool—					
Greasy and slipe . . . . .	632,952	667,588	712,985	650,883	689,619
Scoured and washed and carbonised	66,733	63,291	66,951	53,580	68,698
Exported on skins . . . . .	63,734	67,737	74,264	76,540	90,258
<b>Total raw wool . . . . .</b>	<b>763,418</b>	<b>798,615</b>	<b>854,200</b>	<b>781,003</b>	<b>848,575</b>
Semi-processed wool—					
Tops . . . . .	19,902	21,229	19,284	17,251	19,302
Yarn . . . . .	109	91	126	235	311
<b>Total raw and semi-processed wool . . . . .</b>	<b>783,429</b>	<b>819,935</b>	<b>873,609</b>	<b>798,489</b>	<b>868,186</b>

**Value of wool exported**

The value of wool (other than wool on sheepskins) exported from Australia during 1971-72 was 12 per cent of the total value of exports of merchandise of Australian origin, while the proportion for the five years ended 1971-72 averaged 18 per cent. The values for the five years ended 1971-72, together with the principal countries to which wool was exported, are shown in the following table.

**VALUE OF WOOL EXPORTS: AUSTRALIA(a), 1967-68 TO 1971-72**  
(\$'000)

Country of consignment	1967-68	1968-69	1969-70	1970-71	1971-72
Belgium-Luxembourg . . . . .	32,712	32,709	28,026	24,486	16,149
France . . . . .	49,430	59,991	53,615	42,155	53,087
Germany, Federal Republic of . . . . .	46,517	48,994	48,202	39,246	45,555
Italy . . . . .	60,182	70,127	63,928	33,863	42,012
Japan . . . . .	245,882	263,320	259,766	198,276	220,300
United Kingdom . . . . .	71,846	63,947	62,784	30,062	32,470
United States of America . . . . .	47,058	49,753	36,386	14,672	13,133
U.S.S.R. . . . .	27,368	40,104	43,212	35,349	29,860
Other . . . . .	134,736	166,562	165,124	125,718	129,630
<b>Total . . . . .</b>	<b>715,731</b>	<b>795,507</b>	<b>761,043</b>	<b>543,827</b>	<b>582,196</b>

(a) Excludes wool exported on sheepskins.



**World sheep numbers and wool production**

The following table shows particulars of the woolled sheep numbers and total production of wool, in terms of greasy, in the principal wool-producing countries of the world, together with estimates of world production of merino, crossbred, and carpet type wool for the latest available years.

In 1971-72 Australia produced 33 per cent of the world total of all types of wool. Other principal wool producers were New Zealand with 12 per cent of the world total, Argentina, 7 per cent, South Africa, 4 per cent, and United States of America, 3 per cent. Production in the U.S.S.R., China, and eastern European countries together amounted to 22 per cent.

Australia's wool clip is predominantly merino. New Zealand and Argentina produce mainly crossbred wool, while the clip of the U.S.S.R. is largely of the carpet type.

**ESTIMATED WORLD WOOLLED SHEEP NUMBERS AND PRODUCTION OF WOOL  
1969-70 TO 1971-72**

(Source for countries other than Australia: Reports published by the Commonwealth Secretariat, London)

Country	Sheep numbers (million)			Wool production (million kg—greasy basis)		
	1969-70	1970-71	1971-72(a)	1969-70	1970-71	1971-72(a)
Australia . . . . .	180	178	163	923	886	875
New Zealand . . . . .	60	59	59	328	334	322
Argentina . . . . .	44	43	39	201	200	189
South Africa . . . . .	32	30	29	145	123	113
United States of America . . . . .	20	20	19	88	85	82
Uruguay . . . . .	20	19	18	80	78	54
United Kingdom . . . . .	26	26	27	48	46	48
U.S.S.R., China, Eastern Europe(b) . . . . .	236	244	246	560	589	596
Other . . . . .	334	332	332	406	409	402
<b>World total . . . . .</b>	<b>952</b>	<b>951</b>	<b>932</b>	<b>2,779</b>	<b>2,750</b>	<b>2,681</b>
Type of wool—						
Apparel type—						
Merino . . . . .				1,148	1,106	1,067
Crossbred . . . . .				1,055	1,061	1,035
Carpet type . . . . .				576	583	579

(a) Provisional. (b) This group comprises Albania, Bulgaria, The People's Republic of China and Dependencies, Czechoslovakia, East Germany, Hungary, Outer Mongolia, Poland, Romania, Tibet, and U.S.S.R.

**Principal importing countries and sources of supply**

The following table, prepared from information published by the Commonwealth Secretariat, furnishes, in respect of the principal importing countries, details of their imports of wool for 1971 together with the chief sources of supply. The quantities imported refer to the actual weight of wool without distinguishing between greasy and scoured, except in the case of the United States of America, where estimated clean content of wool is quoted.

**PRINCIPAL WOOL IMPORTING COUNTRIES AND SOURCES OF SUPPLY, 1971**

(Source: Information published by the Commonwealth Secretariat, London)  
(Million kg)

Importing country	Quantity imported from(a)—					Total imports
	Australia	New Zealand	Argentina	South Africa	Other countries	
Japan . . . . .	263	21	8	13	3	308
United Kingdom . . . . .	33	58	7	12	41	151
France . . . . .	84	52	6	19	10	171
Italy . . . . .	53	11	3	6	16	89
Belgium . . . . .	29	21	2	..	52	104
Germany, Federal Republic of . . . . .	49	18	6	14	25	111
United States of America(b) . . . . .	11	27	7	2	10	57

(a) Actual weight of greasy and scoured wool.

(b) Imports are in terms of estimated clean content of greasy and scoured wool.

As a considerable transit trade exists between European countries, it must not be assumed that the whole of the imports recorded by these countries is retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom and Belgium.

## Pastoral products: meat

### Australian Meat Board

The Australian Meat Board, which was re-constituted under the *Meat Industry Act* 1964–1969, is the body responsible for controlling the external marketing of Australian beef, mutton and lamb. Powers and membership of the Board prior to 1964 are set out on page 801, Year Book No. 40. Following its reconstitution it consisted of five members representing meat producers, two representing meat exporters, one representing the Commonwealth Government, and an independent Chairman. The Meat Industry Act was amended in 1969 to provide for the appointment of an additional member to represent meat producers. The Board's primary function is to ensure that Australian meat exports are marketed in a manner which will safeguard the long-term interests of the Australian meat industry.

The Board regulates overseas marketing of Australian meat by means of an export licensing system. It has power of control over the kinds of meat that may be exported by licensed exporters to particular places, or to particular agents and representatives. The Board also has power to undertake measures to promote the sale and consumption of meat both in Australia and overseas, and it may purchase and sell meat in its own right for the purpose of market development. However, the exercise of this power is limited to activities aimed at meeting special marketing problems or circumstances which preclude the effective participation of private traders. The Board may also purchase and sell meat, with the approval of the Minister for Primary Industry, for the purpose of administering any international arrangements to which Australia may be a party.

### Meat research schemes

In November 1965 the Commonwealth Parliament passed legislation providing for the extension of the cattle and beef research scheme to cover beef, mutton and lamb research. Details of the beef research scheme were set out on page 1050, Year Book No. 51. Under the new legislation the Cattle and Beef Research Committee was re-constituted as the Meat Research Committee, its powers and functions being similar to those of the former Committee extended to include mutton and lamb research. The Meat Research Committee consists of twelve members—seven meat producer representatives, the Chairman of the Australian Meat Board (Chairman), one representative from the universities engaged in meat research, the Commonwealth Scientific and Industrial Research Organization, the Australian Agricultural Council, and the Department of Primary Industry. The new Committee came into being in March 1966 and the Cattle and Beef Research Committee ceased to exist from that date.

The scheme is financed from the Livestock Slaughter Levy (*see below*). The Commonwealth makes a matching contribution on a \$1 for \$1 basis to meet expenditure on research. The research is conducted by such bodies as the universities, C.S.I.R.O., State Departments of Agriculture and the Bureau of Agricultural Economics.

The Minister for Primary Industry approved a beef research program of \$2,546,000, and a mutton and lamb research program of \$1,306,000 for 1972–73.

### The Livestock Slaughter Levy

The *Livestock Slaughter Levy Act* 1964–1966 imposed a levy on all cattle (over 200 lb dressed weight), sheep and lambs slaughtered within Australia for human consumption. These levies operated from 1 August 1964 and have replaced the charge imposed on meat exports and also subsumed the cattle levy for beef research purposes imposed in 1960 (*see page 909*, Year Book No. 51). In November 1968 legislation was passed amending the Act to provide for an additional levy to finance service and investigation activities relating to meat processing. The amended legislation (the *Livestock Slaughter Levy Act* 1964–1971) now provides three elements in the levy for each class of livestock—an amount to finance meat research; an amount to finance the operations of the Australian Meat Board; and, from 1 January 1969 until 31 December 1974, an amount to finance service and investigation activities relating to meat processing. The first two elements are paid by producers while the third element is paid by meat processors.

Under the Act the total levy may not exceed 75.0c a head for cattle or 7.5c a head for sheep and lambs. The amount levied for research may not exceed 25.0c a head for cattle or 3.3c a head for sheep and lambs while the amount for service and investigation activities relating to meat

processing is set for the period of its operation at 1.0c a head for cattle and 0.1c a head for sheep and lambs. The present operative rate for cattle is 46.0c (25.0c for research; 20.0c to the Australian Meat Board; 1.0c for service and investigation) and for sheep and lambs, 3.85c (1.75c for research; 2.00c to the Australian Meat Board; 0.10c for service and investigation).

#### **United Kingdom long-term purchase arrangements**

Details of the long-term meat contracts with the United Kingdom from 1939 to 1952 and of the Fifteen Year Meat Agreement (1952-67) are given on page 710, Year Book No. 41 and in earlier issues. In September 1953 the trade in meat between the United Kingdom and Australia reverted to private traders. The main features of the arrangements were given in Year Book No. 47, page 960. Details of minimum prices operating and deficiency payments received in recent years under private trading appear in Year Book No. 48 (page 973) and No. 50 (page 1068).

On 30 September 1967 the Fifteen Year Meat Agreement expired, and no new agreement has been negotiated. Australia retained duty-free entry for meat until 1 July 1971 when a variable levy system for beef and veal imports and duties on mutton and lamb were introduced by the United Kingdom Government in preparation for entry into the European Economic Community (E.E.C.).

The United Kingdom became part of an enlarged E.E.C. in 1973 and will progressively adopt the mechanism of the E.E.C. Common Agricultural Policy (C.A.P.) over the period up to 1977. Under the C.A.P., beef and veal imports are mainly controlled by a system of variable levies. At present the C.A.P. does not apply to mutton and lamb but the United Kingdom will gradually increase its duties on mutton and lamb until the level of the full E.E.C. duty (20 per cent) is reached in 1977.

#### **Lamb Guarantee Scheme**

The Australian Meat Board, under the scheme, guaranteed exporters a minimum price on all lambs 36 lb and under shipped to the United Kingdom. The scheme operated from 1962-63 lamb export season until it was discontinued by the Board in March 1972. Details of the scheme are shown in Year Book No. 58, page 811.

#### **United States-Australia Meat Agreement**

In February 1964 the Governments of Australia and the United States concluded an agreement for the regulation of beef, veal and mutton exports from Australia to the United States with the object of promoting the orderly development of the trade in these classes of meat between the two countries. (Details of the Agreement were given on page 820 of Year Book No. 56). In June 1970, the United States advised that it was terminating the Agreement at the end of 1970. Legislation enacted by the United States Congress in 1964, details of which were given in previous issues of the Year Book, provides for restrictions on imports of fresh, chilled and frozen beef, veal, mutton, and goatmeat from all sources if such imports are estimated by the United States Secretary of Agriculture to exceed a predetermined figure (the trigger point) calculated by a formula in the legislation. Should quotas be necessary the total permissible imports would be set some 10 per cent below the trigger point. Until 1968 the estimate of imports did not exceed the trigger point and quotas were not necessary. However, late in that year it appeared likely that quotas would be triggered and to avoid this all major suppliers agreed to restrain shipments. The total restraint level was set approximately half way between the quota level and trigger point. A similar situation arose in 1969 and 1970 and restraints again operated. However in June 1970 the estimate of imports exceeded the trigger point and the United States President suspended the operation of quotas and announced new higher restraint levels for all major suppliers. In 1971 the United States President exercised, as in 1970, his powers under the legislation and announced that the operation of quotas would be suspended as suppliers had agreed to enter into a restraint agreement with the United States to keep the import level to 517,900 tons. In June 1972, the President announced that the restraint arrangements for 1972 had been suspended for the remainder of the year in an effort to control increases in meat prices in the United States. In December 1972 it was announced that the suspension of restraint arrangements would continue into 1973, subject to quarterly review.



**Cattle slaughtered****CATTLE (INCLUDING CALVES) SLAUGHTERED: STATES AND TERRITORIES  
1967-68 TO 1971-72**

('000)

Year	Slaughtering passed for human consumption									Total slaughterings including boiled down
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
1967-68 . . .	1,447	1,713	1,664	245	333	172	74	10	5,656	5,731
1968-69 . . .	1,417	1,514	1,823	220	366	178	80	10	5,608	5,672
1969-70 . . .	1,545	1,709	1,680	249	402	178	83	15	5,861	5,921
1970-71 . . .	1,573	1,845	1,590	264	348	162	69	19	5,870	5,896
1971-72 . . .	1,717	2,074	1,708	291	389	185	77	20	6,461	6,514

**Production of beef and veal****PRODUCTION OF BEEF AND VEAL (CARCASS WEIGHT): STATES AND TERRITORIES  
1967-68 TO 1971-72**

(Tons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68 . . .	220,879	223,307	310,478	33,074	59,249	25,084	15,879	1,692	889,642
1968-69 . . .	217,011	212,859	340,744	35,617	67,751	27,936	16,239	1,891	920,048
1969-70 . . .	273,358	249,574	309,771	40,059	71,902	31,011	16,147	2,636	994,458
1970-71 . . .	277,910	302,663	297,412	42,807	63,318	29,407	14,092	3,129	1,030,738
1971-72 . . .	300,877	331,187	339,367	49,277	76,070	34,246	15,176	3,242	1,149,442

**Consumption of beef and veal**

The highest post-war consumption of beef and veal (including canned beef and veal) was 132.7 lb per head in 1956-57. With the buoyant overseas market for beef and the high prices ruling in Australia during the following four years, consumption per head fell substantially, and in 1960-61 amounted to only 88.3 lb. In 1971-72 consumption per head was 91.3 lb, of which 87.0 lb was carcass meat and 4.3 lb was canned meat (in terms of carcass equivalent).

**PRODUCTION AND DISPOSAL OF BEEF AND VEAL (CARCASS WEIGHT)  
AUSTRALIA, 1967-68 TO 1971-72**

Year	Net change in stocks	Pro- duction	Exports (a)	For canning	Apparent consumption in Australia	
					Total	Per head per year
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1967-68 . . .	- 6	890	381	38	478	89.7
1968-69 . . .	+ 12	920	380	34	495	91.3
1969-70 . . .	+ 5	994	481	35	473	85.6
1970-71 . . .	+ 1	1,031	491	44	494	87.5
1971-72 . . .	+ 11	1,149	585	54	500	87.0

(a) Includes carcass equivalent of boneless beef exported and all fresh and frozen meat shipped as ships' stores.

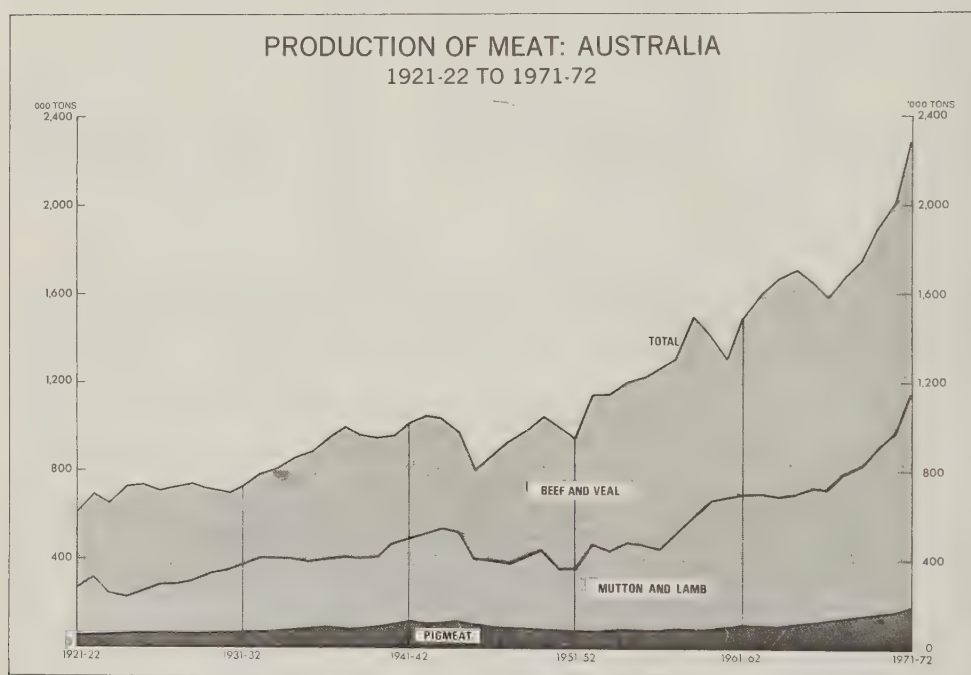
**Exports of beef and veal**

While beef and veal were previously shipped largely in carcass form, there has been in recent years a substantial increase in the amount of boneless beef exported. From 1958-59 to 1971-72 the quantity of boneless beef shipped exceeded that exported in carcass form. The trade in boneless beef has been developed principally with the United States of America. In 1971-72, the principal markets for Australian beef and veal exports were the United States (570,924,000 lb, valued at \$259,780,000); Japan (105,330,000 lb, valued at \$44,639,000); and the United Kingdom (89,215,000 lb, valued at \$34,421,000).

**EXPORTS OF FROZEN AND CHILLED BEEF AND VEAL(a): AUSTRALIA  
1967-68 TO 1971-72**

Year	<i>Exports of frozen and chilled beef</i>				<i>Exports of frozen veal</i>		<i>Exports of frozen and chilled beef and frozen veal</i>	
	<i>Bone-in</i>		<i>Boneless</i>		<i>Quantity</i>	<i>Value</i>	<i>Quantity</i>	<i>Value</i>
	<i>Quantity</i>	<i>Value</i>	<i>Quantity</i>	<i>Value</i>				
	'000 lb	\$'000	'000 lb	\$'000	'000 lb	\$'000	'000 lb	\$'000
		f.o.b.		f.o.b.		f.o.b.		f.o.b.
1967-68.	7,950	2,845	546,473	191,679	9,645	4,064	564,068	198,588
1968-69.	7,218	3,045	548,768	204,247	8,389	3,681	564,375	210,973
1969-70.	29,490	9,068	681,602	277,858	11,804	5,200	722,896	292,126
1970-71.	71,302	21,277	663,114	275,806	12,415	5,768	746,831	302,851
1971-72	39,596	13,627	823,788	364,669	21,788	10,615	885,172	388,911

(a) Actual weight shipped, not carcass equivalent.



## Sheep slaughtered

**SHEEP (INCLUDING LAMBS) SLAUGHTERED: STATES AND TERRITORIES**  
**1967-68 TO 1971-72**  
('000)

Year	<i>Slaughtering passed for human consumption</i>									<i>Total slaughtering including boiled down</i>
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
1967-68	12,099	14,999	2,491	4,019	3,173	1,125	..	103	38,008	38,164
1968-69	12,950	12,882	2,724	2,977	3,808	1,241	..	130	36,712	36,803
1969-70	13,309	15,745	2,937	4,232	4,534	1,297	..	158	42,213	42,384
1970-71	14,948	16,434	2,906	5,101	4,416	1,394	2	196	45,397	45,709
1971-72	16,641	20,084	3,418	5,144	6,001	1,475	4	218	52,983	53,444

## Production of mutton and lamb

**PRODUCTION OF MUTTON AND LAMB (CARCASS WEIGHT): STATES AND TERRITORIES**  
**1967-68 TO 1971-72**  
(Tons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	203,169	261,615	43,801	68,730	55,059	19,845	9	1,795	654,023
1968-69	223,945	247,972	48,208	56,824	67,713	22,452	1	2,240	669,355
1969-70	233,501	277,710	50,711	78,172	76,814	23,669	2	2,482	743,061
1970-71	258,567	307,534	49,390	90,471	77,401	25,661	33	3,163	812,220
1971-72	284,982	374,436	57,964	90,058	103,459	26,759	65	3,496	941,219

## Consumption of mutton and lamb

In 1959-60 consumption of mutton and lamb, at 103 lb per head of population, exceeded that of beef and veal for the first time on record. Subsequently, it showed a continuous decline until 1965-66, when it fell to 82.8 lb per head. The 1971-72 figure was 99.0 lb per head or 12.0 lb per head more than beef and veal.

**PRODUCTION AND DISPOSAL OF MUTTON AND LAMB**  
**(CARCASS WEIGHT): AUSTRALIA, 1967-68 TO 1971-72**

Year			Net change in stocks ( <sup>'000</sup> tons)	Pro- duction ( <sup>'000</sup> tons)	Exports (a) ( <sup>'000</sup> tons)	For canning ( <sup>'000</sup> tons)	Apparent consumption in Australia	
							Total ( <sup>'000</sup> tons)	Per head per year (lb)
MUTTON								
1967-68	.	.	+3	412	180	8	222	41.7
1968-69	.	.	+2	366	129	7	229	42.2
1969-70	.	.	+1	434	218	7	207	37.5
1970-71	.	.	+5	463	198	14	246	43.5
1971-72	.	.	+2	587	312	14	258	45.0
LAMB								
1967-68	.	.	..	242	11	..	230	43.2
1968-69	.	.	+1	303	43	..	259	47.8
1969-70	.	.	-1	309	47	..	262	47.5
1970-71	.	.	+1	349	51	..	297	52.7
1971-72	.	.	+2	354	43	..	310	54.0

(a) Includes carcass equivalent of boneless mutton exported.



## Exports of frozen mutton and lamb

## EXPORTS OF FROZEN MUTTON AND LAMB(a): AUSTRALIA, 1967-68 TO 1971-72

Year	Exports of frozen mutton		Exports of frozen lamb		Exports of frozen mutton and lamb	
	Quantity	Value	Quantity	Value	Quantity	Value
	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.
1967-68 . . .	232,317	44,141	20,336	5,546	252,653	49,687
1968-69 . . .	167,564	32,213	65,004	13,216	232,568	45,429
1969-70 . . .	300,908	60,912	91,289	20,470	392,197	81,382
1970-71 . . .	288,609	52,132	96,172	21,878	384,781	74,010
1971-72 . . .	442,943	89,283	82,965	17,774	525,908	107,057

(a) Actual weight shipped, not carcass equivalent.

In 1971-72 the principal buyers of Australian frozen mutton and lamb were Japan (153,518,000 lb, valued at \$28,494,000); the United States of America (70,546,000 lb, valued at \$18,716,000); Greece (70,280,000 lb, valued at \$15,251,000); and the United Kingdom (64,462,000 lb, valued at \$12,694,000).

## Consumption of meat and meat products

The apparent consumption of meat (including cured and canned meat) and edible offal per head of population in Australia is shown in the table below for the years 1967-68 to 1971-72.

## MEAT (INCLUDING CURED AND CANNED) AND EDIBLE OFFAL AVAILABLE FOR CONSUMPTION: AUSTRALIA, 1967-68 TO 1971-72

(lb per head per year)

Year	Beef and veal(a)	Mutton (a)	Lamb(a)	Pork(a)	Offal	Canned meat(b)	Bacon and ham(c)	Carcass equivalent of meat and meat products (d)	
1967-68 . . .	89.8	41.7	43.2	14.6	11.4	4.8	7.7	217.7	
1968-69 . . .	91.3	42.2	47.8	16.2	11.3	4.9	7.8	225.7	
1969-70 . . .	85.6	37.5	47.5	16.7	11.5	5.1	8.3	216.6	
1970-71 . . .	87.5	43.5	52.7	15.2	11.3	5.4	10.2	231.8	
1971-72 . . .	87.0	45.0	54.0	17.1	12.9	5.0	9.6	235.8	

(a) Carcass weight.

(b) Canned weight.

(c) Cured carcass weight.

(d) Includes offal.

## Other pastoral products

## Tallow

Details of tallow consumption are collected from the principal factories using tallow. Recorded usage of inedible tallow in factories for the years 1968-69 and 1969-70 was as follows: for soap-making: 1968-69, 74,764,573 lb; 1969-70, 72,891,206 lb; for products other than soap: 1968-69, 24,714,887 lb; 1969-70, 25,966,499 lb. Particulars for 1970-71 were not collected. Figures for 1971-72 are not yet available. Details of edible tallow usage in factories are not available.

Particulars of exports of edible and inedible tallow of Australian origin are shown in the following table for the five years 1967-68 to 1971-72.

**TALLOW: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72**

(cwt)

	1967-68	1968-69	1969-70	1970-71	1971-72
Edible . . .	88,465	201,847	348,005	348,947	334,856
Inedible. . .	1,654,071	2,035,529	3,019,497	2,739,091	3,930,480
<b>Total . . .</b>	<b>1,742,536</b>	<b>2,237,376</b>	<b>3,367,502</b>	<b>3,088,038</b>	<b>4,265,336</b>

**Overseas trade in hides and skins**

The value of cattle and horse hides, sheep and other skins, and skin pieces sent overseas during 1971-72 amounted to \$82,073,000, compared with a total of \$73,566,000 in 1970-71 and \$89,360,000 in 1969-70.

**EXPORTS OF SHEEPSKINS WITH WOOL: AUSTRALIA  
1969-70 TO 1971-72**

Country of assignment	Quantity ('000 lb)			Value (\$'000 f.o.b.)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
France . . . . .	147,042	169,168	189,076	35,495	29,887	33,573
Germany, Federal Republic of . . . . .	14,697	11,213	13,899	3,664	2,642	2,753
Italy . . . . .	50,404	40,551	41,119	15,179	8,489	6,922
Netherlands . . . . .	3,664	3,464	5,374	874	608	841
Spain . . . . .	5,323	1,901	6,612	1,555	381	1,029
United Kingdom . . . . .	10,972	9,546	11,027	2,724	1,742	1,585
Yugoslavia . . . . .	7,499	15,150	13,446	1,857	3,069	1,552
Other . . . . .	7,738	8,120	11,100	2,308	2,451	2,686
<b>Total . . . . .</b>	<b>247,340</b>	<b>259,113</b>	<b>291,653</b>	<b>63,656</b>	<b>49,269</b>	<b>50,941</b>
<b>Number of skins ('000) . . . . .</b>	<b>34,109</b>	<b>36,181</b>	<b>40,015</b>	<b>..</b>	<b>..</b>	<b>..</b>

In 1971-72 a total of 2,244,000 sheepskins without wool were exported, valued at \$1,000,000. Of these, sheepskins without wool to the value of \$197,000 (20 per cent) were shipped to the United States of America, \$175,000 (18 per cent) to the United Kingdom and \$162,000 (16 per cent) to France.

The export trade in cattle hides and calfskins during 1971-72 was distributed among the main importing countries as follows: Japan, \$7,263,000, Poland, \$3,399,000, the Federal Republic of Germany, \$3,009,000, and Italy, \$2,518,000. The total quantity exported was 177,523,000 lb, valued at \$28,095,000.

The exports of furred skins in 1971-72 were valued at \$1,692,000, of which kangaroo and wallaby skins constituted \$1,355,000 and rabbit and hare skins \$165,000. In 1970-71 they accounted for \$1,847,000 and \$405,000 respectively, out of a total of \$2,399,000. The skins were shipped principally to the United States of America, Italy, the Federal Republic of Germany, and Japan; the values shipped to each in 1971-72 being \$660,000, \$424,000, \$223,000 and \$90,000 respectively.

The quantity of cattle hides, including calfskins, imported into Australia during the year 1971-72 amounted to 776,000 lb, valued at \$145,000. The chief source of supply was New Zealand.

**OTHER RURAL INDUSTRIES: DAIRYING, PIG, POULTRY AND  
BEE FARMING****The dairying industry**

Australian dairy cattle have shown steady improvement in quality, as demonstrated by milk yield, over the years. This is attributable to improved breeding, associated with herd recording, better feeding resulting from the use of improved pastures, and better farming methods arising from the development of modern farm machinery and the application of the results of research.

The Australian dairying industry is conducted under conditions ranging from tropical to temperate and mediterranean type climates, and in general, is confined to the coastal and near coastal regions where rainfall and topography are favourable. These conditions are found in parts of the eastern, southern and south-western coasts. Inland districts include the lower north-east of Victoria, the south-western slopes of New South Wales, the fertile Darling Downs in Queensland, and the irrigated districts of the Riverina in New South Wales and northern Victoria.

The manufacturing and processing sections of the industry are well advanced technologically and certain techniques and equipment developed in Australia are now being adopted overseas. State Agricultural Departments give advice on approved methods of production and inspect animals, buildings and marketable produce, to ensure that the latest advances in technology are passed on to the farmer and that hygiene standards are maintained at a high level.

### **Marginal Dairy Farms Reconstruction Scheme**

The Marginal Dairy Farms Reconstruction Scheme was introduced in July 1970 and is to operate for a period of four years. It provides funds up to a maximum of \$25 million, to State Governments to purchase marginal dairy farms from producers who wish to leave the industry and to enable them to sell the land on favourable terms to neighbouring farmers who want to build up their holdings to an economic size. By the end of February 1973, 1,041 dairy farms had been offered to the States for acquisition; purchase and subsequent sale of 520 had been arranged; 323 applications had been rejected; and 170 applications had been withdrawn or had lapsed. The cost of purchase to that date amounted to \$13 million. The scheme has had its greatest impact in Queensland where 75 per cent of the build-ups effected have been located.

### **Marketing of dairy products**

The export trade is regulated by the terms of the *Commonwealth Customs Act* 1901-1971 and the *Commonwealth Commerce (Trade Descriptions) Act* 1905-1966 and regulations thereunder. This legislation requires that the true trade descriptions, etc., be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are given a certificate by the inspector.

Details of the *Dairy Produce Export Control Act* 1924-1966 and of the Australian Dairy Produce Board constituted under it were given in earlier issues of the Year Book (see No. 48, pages 999-1000). The Act was amended in 1972 to clarify the general provisions enabling the Board to expand existing markets and secure new ones and to provide the Board with specific power to participate in commercial ventures as a means of expanding existing markets or securing new ones. The administrative expenses of the Australian Dairy Produce Board and other sundry expenditure were met from the proceeds of a levy imposed by the *Dairy Produce Export Charges Act* 1964 (see Year Book No. 51, page 1070). In 1965 this Act, together with the *Dairy Produce Levy Act* 1958, was replaced by the *Butter Fat Levy Act* 1965-1972 (see page 828).

### **Equalisation schemes**

Reference is made to the butter and cheese equalisation schemes in Year Book No. 48, pages 998-9. Particulars of the returns realised on local and overseas sales and of the average equalisation rate for the years ended June 1968 to 1973 are given on page 834 of this issue. Details are also given on page 833 of the wholesale prices of butter and cheese for home consumption as determined by the Australian Dairy Industry Council.

An equalisation scheme for casein similar to that for butter and cheese has been operated since 1952 by the Commonwealth Dairy Produce Equalisation Committee Ltd. Average realisations per cwt under the scheme were \$24.789 in 1969-70, \$24.283 in 1970-71, \$28.988 in 1971-72. For 1972-73 the interim rate is \$27.50 (Details of returns for earlier seasons are given in previous issues of the Year Book.)

From 1 July 1970 a skim milk powder equalisation scheme was commenced by the Commonwealth Dairy Produce Equalisation Committee Ltd. For 1970-71 the final rate was \$211.181 a ton and for 1971-72 \$286.088 a ton. For 1972-73 the interim rate is \$275.00.

Statutory support for the equalisation scheme was provided by legislation passed by Parliament during 1970 and ratified by producers at a referendum held in February 1971. The legislation consists of *The Dairying Industry Equalisation Act* 1970, *The Dairying Industry Levy Act* 1970, and *The Dairying Industry Levy Collection Act* 1970. (See Year Book No. 57, page 818).

The basic element of the legislation is the establishment of a fund by way of a levy on the production of butter, butteroil, cheese, casein and such other dairy produce as may be prescribed to provide the necessary finance for equalisation payments. The legislation has been designed to permit the imposition of the levy on one product or a number of products as circumstances warrant. It will not be implemented unless there is a specific need created such as by the withdrawal of an important manufacturer from the present voluntary equalisation scheme.



### Commonwealth bounties and stabilisation plans

*Butter and cheese.* Under the provisions of the various Dairy Industry Assistance Acts, the first of which was passed in 1942, the Commonwealth Government has provided bounties on milk supplied for the manufacture of butter and cheese. Bounties were paid on a seasonal basis prior to 1 April 1946, but from that date have been on a flat rate basis. Bounties are distributed by the Commonwealth Dairy Produce Equalisation Committee Ltd, through factories, to milk and cream producers by payments on butter and cheese manufactured. Details of the three five-year stabilisation plans which operated up to 30 June 1962, will be found in Year Book No. 49, page 1084. Information regarding the plan which operated during the five years ended 30 June 1967 appears in Year Book No. 52, page 961 and details of the plan which concluded on 30 June 1972 are given in Year Book No. 58 page 818.

A new five-year stabilisation plan came into operation on 1 July 1972 which provided for continued financial assistance for butter and cheese producers. The level of assistance is to be determined annually in the light of the needs and circumstances of the industry, but will be not less than \$27 million annually. In respect of 1972-73 season production, the assistance has been fixed at \$27 million. The underwriting of final minimum equalised returns on butter and cheese was not continued under the new plan, but for the 1972-73 season, the Government guaranteed to compensate the Commonwealth Dairy Produce Equalisation Committee Ltd, for any loss incurred, as a result of fixing an interim equalisation value, which would enable factories to pay suppliers of cream for butter manufacture an opening pay rate of 34 cents per lb for commercial butter. This undertaking was in respect of one year only.

### Dairy industry stabilisation fund

Amounts realised on exports of butter and cheese were, in 1948-49 and 1949-50, in excess of the f.o.b. equivalent of the then guaranteed return and were credited to the Dairying Industry Stabilisation Fund, which was established in July 1948 for the purpose of stabilising returns from exports. During 1951-52 the Stabilisation Fund met the deficiency in respect of all exports which did not earn sufficient to meet the basic return to the factory. From 1 July 1952 to 30 June 1957 it was available to the industry to be used, in whatever manner it considered desirable, to make good any deficiency in respect of all exports other than the 20 per cent provided for under the Commonwealth Government's Five-year Stabilisation Plan. The Act was amended in 1957 to enable the Board to use the fund for such other purposes as are approved by the Minister for Primary Industry, and this amendment was later extended by the *Dairying Industry Act* 1967 to the present time. The balance of accumulated funds in the Dairying Industry Stabilisation Fund at 30 June 1972 totalled approximately \$6,595,000. The major portion of the fund represents capital and other investments in milk recombining plants now established by the Board in Bangkok, Cambodia, Djakarta and Manila.

*Processed milk products.* As part of the Five Year Stabilisation Plan the Government provided, under the *Processed Milk Products Bounty Act* 1962-1972, for the payment of a maximum amount of \$800,000 as a bounty on exports of processed milk products in each year. Details of earlier bounties are given in Year Book No. 58, page 818.

*Whole milk.* In addition to the bounties referred to above, the Commonwealth Government subsidised the production of whole milk consumed directly from 1943-44 to 1948-49. Details of the amounts distributed during each year will be found in Year Book No. 38, page 1031.

### Extension, research and promotion of the dairying industry

*Dairy Industry Extension Grant.* An annual grant of \$500,000, to be expended by State Governments for the purpose of promoting improved farming practices in the dairying industry, was first made by the Commonwealth Government for the five years from 1 July 1948. The grant was renewed at the same level until 30 June 1963 when it was increased to \$700,000 per annum. On 1 July 1966 the Dairy Industry Extension Grant became part of the new Commonwealth Extension Services Grant, and assistance to the State agricultural departments for extension services to the dairying industry continued to be maintained and enlarged from funds from this source.

*Dairy industry research and sales promotion.* At the request of the Australian Dairy Industry Council, legislation was enacted in 1958 to provide for a sales promotion campaign for butter and cheese in Australia and also for research into industry problems. The legislation provided for a statutory levy on the manufacture of butter and cheese (the Dairy Produce Levy) which was initially set at rates of 0.104c per lb for butter and 0.052c per lb for cheese, the proceeds being divided equally between research and sales promotion. The rates of levy operative from November 1959 were 0.156c per lb for butter and 0.078c per lb for cheese, of which two-thirds was allocated to sales promotion and one-third to research.

In August 1964 the legislation was amended to include butter powder, at the same rates as for butter, and butteroil and ghee at 0.065c per lb for research and 0.130c per lb for sales promotion. In 1965 the Dairy Produce Levy Act was repealed and replaced by the *Butter Fat Levy Act 1965-1972* which provides for the amalgamation of the three levies into one levy on butterfat used in the manufacture of butter, cheese and related products. The maximum rate of levy in the Act is 48 cents per cwt of butterfat, and the prescribed rate operative since 1 October 1971 is 48 cents per cwt (24 cents for promotion and 24 cents for administration and overseas market development).

The Commonwealth Government agreed to contribute one half of the costs incurred on approved projects included in the program of research, with a maximum contribution of \$1 for \$1 against funds raised by way of levy and allocated to research. The sales promotion program is financed solely by the levy. The following table lists the amounts of levies collected for research and sales promotion during the five years 1967-68 to 1971-72.

**BUTTERFAT LEVY: AMOUNTS COLLECTED FOR RESEARCH AND SALES PROMOTION, 1967-68 TO 1971-72**  
(£)

	1967-68	1968-69	1969-70	1970-71	1971-72
Research(a) . . .	363,700	367,720	413,277	387,088	370,824
Sales promotion . . .	804,300	811,860	908,521	923,494	886,911
<b>Total collected(a) .</b>	<b>1,168,000</b>	<b>1,179,580</b>	<b>1,321,798</b>	<b>1,310,582</b>	<b>1,257,735</b>

(a) Excludes amounts contributed by the Commonwealth Government.

The research scheme is controlled by a statutory body, the Dairying Research Committee. Its function is to recommend to the Minister for Primary Industry on the operative rate of levy and on the allocation of the research funds. (The sales promotion program continues to be administered by the Australian Dairy Produce Board.) The Chairman of the Board is also Chairman of the Dairying Research Committee.

In February 1972, the Commonwealth Government agreed to industry proposals to broaden the scope of the research levy so that it would apply to all producers. Thus dairy farmers supplying milk for human consumption and for condensery products are now levied.

To implement the new scheme, five new Acts were passed by the Government: *Dairying Research Act 1972*; *Dairying Research Levy Act 1972*; *Dairying Research Levy Collection Act 1972*; *Dairy Produce Sales Promotion Act 1972*; *Butter Fat Levy Act 1972*.

The levies are payable either on a butterfat or gallonage basis, according to the normal method of payment to the producer by the dairy factory or authority. The maximum rate of levy is 12 cents per cwt butterfat or 0.04 cents per gallon of milk. The operative rates of levy are prescribed by Regulations. The new scheme came into operation on 1 July 1972.

The sums raised for research purposes from these levies will increase by approximately \$150,000 per year, which with matching contributions from the Commonwealth Government will make over \$1 million per annum available for dairying research.

## Cattle for milk production

## DAIRY BREED BULLS, AND COWS AND HEIFERS USED OR INTENDED FOR PRODUCTION OF MILK OR CREAM, 31 MARCH 1968 TO 1972

				Cows and heifers used or indented for production of milk or cream for sale				
				Heifers				House cows and heifers(c)
				Bulls dairy breed(a)	Cows (in milk and dry)	One year and over(b)	Under one year	
At 31 March								
1972—								
New South Wales	.	.	.	11,717	490,893	123,550	98,089	60,667
Victoria	.	.	.	31,210	1,256,541	320,057	307,612	21,408
Queensland	.	.	.	9,808	420,360	104,486	79,225	29,343
South Australia	.	.	.	5,016	144,573	39,070	36,531	6,782
Western Australia	.	.	.	2,580	96,532	35,706	33,516	5,885
Tasmania	.	.	.	2,724	154,825	36,967	36,093	3,861
Northern Territory	.	.	.	15	254	74	66	115
Australian Capital Territory	.	.	.	24	1,133	290	218	292
Australia	.	.	.	63,094	2,565,111	660,200	591,350	128,353
1971	.	.	.	64,919	2,601,138	687,104	613,985	144,567
1970	.	.	.	69,297	2,673,358	702,982	631,383	156,305
1969	.	.	.	76,651	2,700,635	768,781	624,290	164,548
1968	.	.	.	81,512	2,793,650	754,587	689,038	169,384

(a) Used or intended for service; excludes bull calves (under 1 year). (b) Springing (within 3 months of calving) and other. (c) Kept primarily for rural holdings' own milk supply.

A map showing the distribution of dairy cattle in Australia at 31 March 1963 appears facing page 1082, Year Book No. 50.

## Milking machines

MILKING MACHINES ON RURAL HOLDINGS: NUMBER OF UNITS(a)  
STATES AND TERRITORIES, 1968 TO 1972

At 31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968 . . . . .	40,862	109,137	38,208	18,399	9,317	16,968	40	91	233,022
1969 . . . . .	39,557	112,618	35,401	17,908	9,036	17,057	24	97	231,698
1970 . . . . .	38,013	112,160	34,185	17,642	9,144	16,941	30	75	228,190
1971 . . . . .	(b)	(b)	(b)	17,082	(b)	(b)	(b)	(b)	(b)
1972 . . . . .	32,632	108,745	27,489	16,261	8,401	16,183	27	67	209,805

(a) The number of units indicates the number of cows that can be milked simultaneously, i.e. the cow capacity of installed milking machines. (b) Not collected.

## Production of milk

The quantity of milk produced by a dairy cow can be as high as 1,000 gallons a year, and varies greatly with breed, locality and season. For all dairy cows and for all seasons for Australia prior to 1916 production averaged considerably less than 300 gallons per annum. Largely owing to an improvement in the quality of the cattle and the increased application of scientific methods the 300 gallon average has been exceeded in each year since 1924. In the last five years an average of 551 gallons per cow per annum has been obtained. In 1971-72 the average yield was 577 gallons. The annual average yields per cow shown in the following table are obtained by dividing the total production of whole milk for the year ended June by the mean of the number of cows in milk and dry and house cows at 31 March of that year and of the preceding year. They are, in effect, based on the approximate number of cows which were in milk during any part of the year. The average shown is, therefore, less than that for cows which were yielding during the greater part of the year, but it may be accepted as sufficiently reliable to show the general trend.



**AVERAGE MILK PRODUCTION PER COW: STATES AND AUSTRALIAN CAPITAL TERRITORY  
1967-68 TO 1971-72**  
(Gallons)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1967-68	416	596	354	590	502	581	<i>n.a.</i>	465	497
1968-69	393	663	306	708	546	647	<i>n.a.</i>	486	525
1969-70	463	712	374	724	543	650	158	598	584
1970-71	442	708	348	707	520	618	183	569	574
1971-72	461	687	363	687	568	638	214	501	577

In the following table particulars of the production of whole milk in the various States and Territories are shown for the years 1967-68 to 1971-72. Victoria is the principal milk-producing State, and in 1971-72 the output from that State, 874 million gallons, represented 56 per cent of total production. Output from New South Wales in 1971-72 was 265 million gallons (17 per cent of the total) and that of Queensland 167 million gallons (11 per cent). Production in the remaining States and Territories accounted for 16 per cent.

**TOTAL PRODUCTION OF WHOLE MILK: STATES AND TERRITORIES  
1967-68 TO 1971-72**  
(<sup>'000</sup> gallons)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1967-68	310,056	734,203	217,202	88,822	55,411	90,793	97	900	1,497,484
1968-69	278,930	817,290	171,686	102,808	58,222	102,164	97	898	1,532,096
1969-70	310,876	886,116	191,401	106,236	55,873	103,213	97	939	1,654,751
1970-71	272,177	893,530	169,453	103,336	56,277	98,940	70	773	1,594,555
1971-72	265,343	874,219	167,254	101,572	58,360	100,855	70	704	1,568,378

**UTILISATION OF WHOLE MILK: STATES AND TERRITORIES, 1971-72**  
(<sup>'000</sup> gallons)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Milk used for—									
Butter	92,584	594,895	79,965	27,535	26,702	69,181	..	..	890,863
Cheese	13,415	77,251	17,766	40,841	3,579	13,025	..	..	165,878
Processed milk products	21,167	90,482	69,522	33,196	1,288	18,649	70	704	124,807
Other purposes	138,177	111,591	..	..	26,791	..	..	..	386,830
<b>Total</b>	<b>265,343</b>	<b>874,219</b>	<b>167,254</b>	<b>101,572</b>	<b>58,360</b>	<b>100,855</b>	<b>70</b>	<b>704</b>	<b>1,568,378</b>

In 1971-72, 56.8 per cent of the total milk supply was used for butter, 10.6 per cent for cheese, 8.0 per cent for processed milk products, and 24.7 per cent for other purposes.

**PRODUCTION AND UTILISATION OF WHOLE MILK: AUSTRALIA  
1967-68 TO 1971-72**  
(<sup>'000</sup> gallons)

<i>Year</i>	<i>Quantity used for—</i>				
	<i>Total production</i>	<i>Factory butter</i>	<i>Factory cheese</i>	<i>Processed milk products(a)</i>	<i>Other purposes(b)</i>
1967-68	1,497,484	892,898	149,444	98,555	356,587
1968-69	1,532,096	907,878	158,583	98,945	366,690
1969-70	1,654,751	1,021,105	160,594	103,557	369,494
1970-71	1,594,555	926,626	164,150	129,080	374,699
1971-72	1,568,378	890,863	165,878	124,807	386,830

(a) Quantities of milk used to produce two or more products (for example, initially as full cream milk and subsequently as skim milk) are counted once only. (b) Principally fluid milk for domestic purposes. Includes milk used for farm production of butter and cheese.

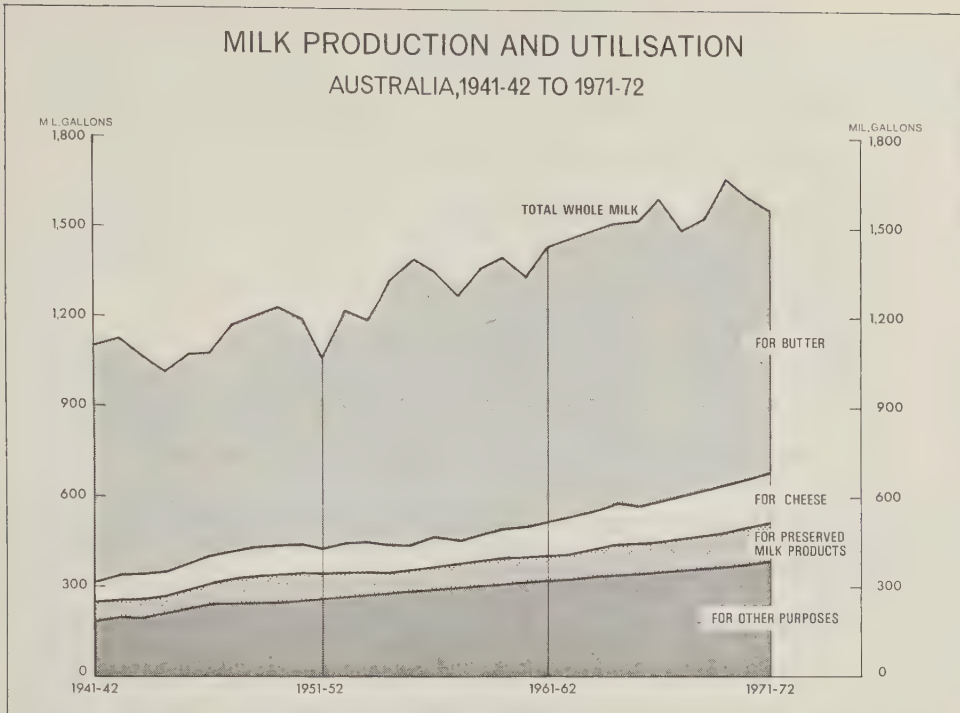


PLATE 48

**Production of butter, cheese and processed milk products**

In 1971-72 factories classified to the industry group Milk Products comprising A.S.I.C. classes 2121 Liquid milk and cream factories, 2122 Butter factories, 2123 Cheese factories, 2124 Ice cream and frozen confections factories and 2125 Milk products n.e.c. factories numbered 388 and were distributed among the States, as follows: New South Wales, 97; Victoria, 142; Queensland, 60; South Australia, 41; Western Australia, 23; Tasmania, 22; Northern Territory, 1 and Australian Capital Territory, 2. Details for 1970-71 were not collected.

Factory production of butter in 1971-72 was 431,579,000 lb. This was 59,960,000 lb (12.2 per cent) below the record of 491,539,000 lb attained in 1969-70.

**BUTTER PRODUCTION IN FACTORIES: STATES, 1967-68 TO 1971-72**  
(<sup>0</sup>000 lb)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1967-68 . .	71,281	241,240	63,546	12,133	13,248	30,865	432,313
1968-69 . .	52,172	278,646	42,916	14,292	13,870	34,966	436,862
1969-70 . .	63,854	312,200	49,888	17,087	12,941	35,568	491,539
1970-71 . .	46,933	299,486	41,387	14,588	11,959	33,671	448,024
1971-72 . .	42,634	287,797	40,108	14,093	13,178	33,770	431,579

Factory production of cheese in 1971-72 reached a record level of 174,556,000 lb, which was 3,552,000 lb (2.1 per cent) more than the previous record of 1970-71.

**CHEESE PRODUCTION IN FACTORIES: STATES, 1967-68 TO 1971-72**  
(<sup>0</sup>000 lb)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1967-68 . .	12,074	73,570	22,181	32,773	4,373	10,414	155,386
1968-69 . .	12,285	75,281	17,813	42,311	(a)	(a)	164,972
1969-70 . .	18,895	73,722	20,492	39,302	3,912	11,896	168,219
1970-71 . .	16,975	78,935	16,947	41,681	4,226	12,239	171,004
1971-72 . .	16,504	85,513	18,190	40,662	4,363	13,058	178,290

(a) Not available for publication.

**FACTORY PRODUCTION OF CHEESE BY VARIETIES: AUSTRALIA  
1967-68 TO 1971-72**

('000 lb)

	1967-68	1968-69	1969-70	1970-71	1971-72
Fetta . . . . .	1,124	1,085	1,298	n.a.	1,250
Cheddar . . . . .	137,616	146,116	149,645		128,784
Cottage . . . . .	2,215	2,612	3,274		3,427
Edam . . . . .	691	8,220	6,123		(b)
Blue Vein . . . . .	102				
Grating . . . . .	9,790				
Soft . . . . .		(a)	(a)		
Gouda . . . . .	(a)	868	1,039		6,590
Other . . . . .	3,848	6,070	6,840		38,239
Total cheese . . . . .	155,386	164,972	168,219	171,004	178,290

(a) Not collected separately. (b) Included with 'Other'.

Processed milk products are manufactured mainly in Victoria, which produced 73 per cent of the total (in terms of whole milk equivalent) in 1971-72. New South Wales accounted for 17 per cent and the remaining States for 10 per cent.

**PRODUCTION OF PROCESSED MILK PRODUCTS: AUSTRALIA, 1967-68 TO 1971-72**

('000 lb)

	1967-68	1968-69	1969-70	1970-71	1971-72
Condensed, concentrated and evaporated milk—					
Full cream—					
Sweetened(a) . . . . .	47,316	40,452	36,551	36,809	36,828
Unsweetened . . . . .	87,946	89,111	125,945	136,240	151,269
Skim . . . . .	18,932	19,990	46,715	31,633	24,694
Ice cream mix (liquid) . . . . .	9,065	15,830	19,243	9,632	7,751
Infants', invalid and health beverages—					
Infants' milk powder . . . . .	16,233	17,474	20,389	17,485	26,476
Other(b) . . . . .	32,001	36,919	34,445	35,376	33,664
Casein . . . . .	44,815	64,982	71,237	62,788	67,040
Powdered milk—					
Full cream—					
Spray . . . . .	46,125	52,249	49,533	55,335	63,485
Roller . . . . .	1,147	1,341	1,126	1,176	1,816
Skim—					
Without added ingredients—					
Spray . . . . .	161,071	123,576	169,214	164,835	164,168
Roller . . . . .	18,606	15,140	13,724	12,972	16,240
With added ingredients—					
Baker's powder . . . . .	5,937	5,765	8,192	6,666	5,475
Other . . . . .	10,415	13,404	16,119	17,265	20,981
Buttermilk or mixed skim and buttermilk—					
Spray . . . . .	15,836	14,918	21,942	20,318	13,540
Roller . . . . .	17,756	19,019	18,548	17,547	17,563
<b>Total powdered milk . . . . .</b>	<b>276,893</b>	<b>245,412</b>	<b>298,398</b>	<b>296,114</b>	<b>303,268</b>

(a) Includes 'coffee and milk'. (b) Includes malted milk and milk sugar (lactose).



**Wholesale prices of butter and cheddar cheese in Australia**

Details of prices operating in each of the States since 1 July 1958 are shown in the following table. The prices included are those determined by the Australian Dairy Industry Council for choicest grade bulk butter and cheddar cheese.

**WHOLESALE PRICES OF BUTTER AND CHEDDAR CHEESE: AUSTRALIA**  
(\$ per cwt)

<i>Date from which prices became effective</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>
<b>Butter—</b>						
1 July 1958 . . .	48.53	48.53	48.42	48.42	48.53	48.53
1 July 1960 . . .	50.17	50.17	50.05	50.17	50.17	50.17
19 June 1964 . . .	51.80	51.80	51.80	51.80	51.80	51.80
14 February 1966 . . .	52.08	52.08	52.08	52.08	52.08	52.08
31 March 1969 . . .	54.60	54.60	54.60	54.60	54.60	54.60
3 August 1971 . . .	56.84	56.84	56.84	56.84	56.84	56.84
<b>Cheddar cheese—</b>						
1 July 1958 . . .	29.17	29.17	29.17	29.17	29.17	29.17
1 July 1960 . . .	29.63	29.63	29.63	29.63	29.63	29.63
19 June 1964 . . .	30.57	30.57	30.57	30.57	30.57	30.57
14 February 1966 . . .	30.80	30.80	30.80	30.80	30.80	30.80
7 November 1966 . . .	33.04	33.04	33.04	33.04	33.04	33.04
10 November 1970 . . .	34.16	34.16	34.16	34.16	34.16	34.16
3 August 1971 . . .	35.28	35.28	35.28	35.28	35.28	35.28
8 November 1971 . . .	38.64	38.64	38.64	38.64	38.64	38.64
15 May 1972 . . .	42.00	42.00	42.00	42.00	42.00	42.00

**Local consumption of butter and cheese**

Following the cessation of butter rationing after the 1939–45 War, consumption per head rose to 31.2 lb in 1951–52. However, in later years it gradually declined, and in 1971–72, at 19.2 lb per head, it reached its lowest level since the war. Consumption of cheese per head has risen steadily in recent years and by 1971–72 it attained a record figure of 9.2 lb per head.

**PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE**  
AUSTRALIA, 1967–68 TO 1971–72

Year	Change in stocks(a) ( <sup>0</sup> 000 lb)	Factory pro- duction ( <sup>0</sup> 000 lb)	Exports(b) ( <sup>0</sup> 000 lb)	Apparent consumption in Australia	
				Total ( <sup>0</sup> 000 lb)	Per head per year (lb)
BUTTER					
1967-68	. . - 3,068	432,313	177,331	258,050	21.6
1968-69	. . + 11,471	439,220	170,709	257,040	21.1
1969-70	. . + 12,974	494,206	226,075	255,157	20.5
1970-71	. . - 15,165	448,024	205,187	258,002	20.4
1971-72	. . + 48,642	431,579	135,928	247,009	19.2
CHEESE					
1967-68	. . - 10,527	155,385	76,249	89,663	7.5
1968-69	. . + 12,375	164,833	56,494	95,968	7.9
1969-70	. . - 22,532	168,206	90,199	100,540	8.1
1970-71	. . - 23,546	171,004	80,571	113,979	9.0
1971-72	. . - 17,617	174,556	73,586	118,587	9.2

(a) Balance figure (includes imports). (b) Includes ships' stores; figures for butter include ghee and butter concentrate expressed as butter.

**Average returns from butter and cheddar cheese sold**

The table below shows rates realised on local, interstate and overseas sales and the average equalisation and subsidy rates in operation for the years ended June 1968 to 1973.

**BUTTER AND CHEDDAR CHEESE: RATES REALISED ON SALES, AVERAGE  
EQUALISATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER  
DAIRYING INDUSTRY ACTS, 1967-68 TO 1972-73**

(Source: Commonwealth Dairy Produce Equalisation Committee Ltd)

(\$ per cwt)

Year	Rates realised on sales				Average equalisa- tion rate	Rate of subsidy	Rate of overall return to manu- facturer
	Intrastate	Interstate	Manu- facturing	Overseas			
Butter—							
1967-68 . . .	49.22	47.17	31.87	27.60	39.50	6.31	45.81
1968-69 . . .	49.75	47.54	32.02	26.67	38.91	6.02	44.93
1969-70 . . .	51.53	48.57	32.17	26.93	38.21	5.40	43.61
1970-71 . . .	51.44	49.21	32.13	26.21	38.90	9.40	48.30
1971-72 . . .	(a)	(a)	(a)	(a)	(b)42.50	(b)8.95	(b)51.45
1972-73 . . .	(a)	(a)	(a)	(a)	(b)39.50	(b)9.75	(b)45.25
Cheddar cheese—							
1967-68 . . .		31.53		17.81	25.04	2.38	27.42
1968-69 . . .		31.50		17.73	24.84	2.87	27.71
1969-70 . . .		31.57		19.81	26.01	2.58	28.59
1970-71 . . .		32.41		18.51	26.62	4.24	30.86
1971-72 . . .		(a)		(a)	(b)30.50	(b)4.27	(b)34.77
1972-73 . . .		(a)		(a)	(b)30.20	(b)2.75	(b)32.95

(a) Not yet available. (b) Interim rates.

The distribution between factory and farm of the overall return to manufacturers for butter is shown in the following table.

**COMMERCIAL BUTTER: AVERAGE OVERALL RETURNS  
AUSTRALIA, 1967-68 TO 1972-73**

(Source: Commonwealth Dairy Produce Equalisation Committee Ltd)

(Cents per lb)

Year	Rate of overall return to manufacturer	Estimated manufacturing cost	Return to dairy farmer
1967-68 . . . .	40.904	4.583	36.321
1968-69 . . . .	40.114	4.750	35.364
1969-70 . . . .	38.933	4.911	34.022
1970-71 . . . .	43.125	5.161	37.964
1971-72 . . . .	(a)45.938	5.161	40.777
1972-73 . . . .	(a)40.402	5.357	35.045

(a) Interim rates.

**Overseas trade in dairy products**

The production of butter and cheese in Australia is considerably in excess of local requirements, and consequently a substantial surplus is available for export overseas. In normal circumstances the extent of this surplus is chiefly dependent upon seasonal conditions.

Exports of butter in 1971-72 amounted to 78.3 million lb, compared with 155.4 million lb in 1970-71. Exports of cheese in these years were 73.5 million lb and 80.4 million lb respectively. The principal importing country for Australian butter in 1971-72 was the United Kingdom, accounting for 30.2 per cent of total exports. In 1971-72 Japan was the principal importing country for Australian cheese with 42.3 per cent of total shipments.

All butter and cheese exported comes under the provisions of the Exports (Dairy Produce) Regulations and is subject to supervision, inspection and examination by officers appointed for that purpose. These commodities are graded according to quality, which has been fixed by regulation

as follows: flavour and aroma, 50 points; texture, 30 points; and condition, 20 points. Butter and cheese graded at 93 to 100 points is of choicest quality; at 90 to 92 points, first quality; butter at 88 to 89, cheese at 86 to 89 points, second quality; and butter at 83 to 85 points, pastry or cooking quality.

In the following table particulars are given of the relative proportions of butter and cheese graded for export according to quality. Further details for 1969-70, which include actual quantities by States, will be found in *Rural Industries*, Bulletin No. 8.

#### BULK BUTTER AND CHEESE GRADED FOR EXPORT: AUSTRALIA, 1969-70 TO 1971-72

Grade	Quantity ('000 lb)			Per cent		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
BUTTER(a)						
Choicest quality . . . .	176,642	129,074	73,425	87.7	87.2	90.0
First quality . . . . .	18,716	14,301	6,430	9.3	9.7	7.9
Second and pastry quality(b) .	6,002	4,557	1,752	3.0	3.1	2.1
<b>Total . . . . .</b>	<b>201,360</b>	<b>147,932</b>	<b>81,607</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
CHEESE						
Bulk cheddar—						
Choicest quality . . . .	22,723	24,131	26,258	28.0	30.8	34.2
First quality . . . . .	34,248	28,285	18,008	42.3	36.2	23.4
Second quality(b) . . . .	4,236	2,227	1,655	5.2	2.8	2.1
Other cheese . . . . .	19,831	23,671	30,951	24.5	30.2	40.3
<b>Total . . . . .</b>	<b>81,038</b>	<b>78,314</b>	<b>76,872</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Includes unsalted. (b) Includes rejected.

Exports of butter, cheese and other milk products of Australian origin are shown in the following table.

#### EXPORTS OF DAIRY PRODUCTS: AUSTRALIA, 1969-70 TO 1971-72

	Quantity ('000 lb)			Value (\$'000 f.o.b.)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Butter(a) . . . . .	179,827	155,444	78,329	43,750	38,148	31,093
Cheese(b)—						
Processed(c) . . . . .	20,367	18,902	20,440	6,580	6,772	8,727
Other—						
Cheddar and epicure cheddar . . . . .	62,016	51,087	43,537	11,027	9,436	10,805
Parmesan (incl. parmigiano and reggiono) . . . . .	70	154	366	33	82	178
Other . . . . .	7,584	10,237	9,138	1,928	2,088	2,710
<b>Total cheese . . . . .</b>	<b>90,037</b>	<b>80,380</b>	<b>73,481</b>	<b>19,570</b>	<b>18,378</b>	<b>22,421</b>
Other milk products(b)—						
Preserved, condensed, concentrated, etc.—						
Sweetened . . . . .	10,606	8,915	9,346	1,385	1,234	1,521
Unsweetened . . . . .	13,130	11,922	9,792	1,504	1,445	1,409
Infants' and invalids' food (essentially of milk)(d) .	12,415	14,994	14,631	3,395	4,330	4,622
Casein . . . . .	66,812	59,301	65,670	12,094	11,562	16,602
Dried or powdered—						
Full cream . . . . .	33,789	37,425	32,769	7,557	8,554	9,400
Skim . . . . .	116,751	109,843	92,339	8,316	9,184	13,879

(a) Excludes butter concentrate, ghee and ship's stores. (b) Excludes ships' stores. (c) Includes pastes and spreads. (d) Includes malted milk.



### The pig industry

In line with the general trend of increased specialisation common to most of the rural industries, pig farming has developed into a separate industry being no longer mainly associated with the dairy industry.

In 1971, a research scheme was established for the Australian Pig Industry. It is similar to those already operating for the benefit of other major rural industries such as wool, meat, wheat, dairy, tobacco, poultry and the dried fruit industries. Finance is provided from a levy of 5 cents per head on all pig slaughterings and this is matched, on a dollar for dollar basis from Commonwealth sources. Funds currently available for research are \$237,400.

The research program is administered by a Pig Industry Research Committee. This Committee, which is representative of the industry and research organisations, makes recommendations to the Minister for Primary Industry relating to the rate of levy and expenditure from the Pig Industry Research Trust Fund.

At 31 March 1972 the number of pigs in Australia reached a record level of 3,198,683 which represented an increase of 608,488 (23.5 per cent) on the previous record at 31 March 1971 (2,590,195).

#### PIGS: NUMBERS IN STATES AND TERRITORIES, 1968 TO 1972

<i>At 31 March</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.(a)</i>
1968 . .	645,196	376,990	520,141	242,319	182,507	86,517	1,999	2,055,669
1969 . .	690,226	421,655	535,496	288,019	219,787	95,363	2,488	2,253,034
1970 . .	707,703	495,128	479,586	350,748	250,051	111,275	3,873	2,398,364
1971 . .	796,184	519,779	491,328	389,417	277,501	112,636	3,229	2,590,195
1972 . .	1,059,331	589,992	534,502	478,874	427,061	103,934	4,862	3,198,683

(a) Incomplete; excludes Australian Capital Territory.

A long-term comparison of pig numbers is given in the division Pastoral Production of this chapter (*see* page 803). A map showing the distribution of pigs in Australia at 31 March 1963 faces page 1083, Year Book No. 50 and a graph showing the number of pigs in Australia from 1880 onwards appears on plate 45 of this Year Book (*see* page 805).

#### PIGS SLAUGHTERED: STATES AND TERRITORIES, 1967-68 TO 1971-72 (<sup>'000</sup>)

<i>Year</i>	<i>Slaughterings passed for human consumption</i>								<i>Total slaughterings (including boiled down)</i>
	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1967-68 . .	908	700	735	310	242	143	3	9	3,049
1968-69 . .	1,008	771	800	317	263	139	3	10	3,310
1969-70 . .	1,065	895	757	386	316	160	3	12	3,593
1970-71 . .	1,093	941	742	436	316	171	3	16	3,717
1971-72 . .	1,094	1,051	794	436	367	165	4	17	3,928

#### Production of pigmeat, bacon and ham

#### PRODUCTION OF PIGMEAT (CARCASS WEIGHT): STATES AND TERRITORIES 1967-68 TO 1971-72 (Tons)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1967-68 . .	41,129	33,204	36,739	15,787	13,159	6,890	93	385	147,386
1968-69 . .	46,313	36,582	39,168	15,939	14,006	7,024	107	460	159,599
1969-70 . .	49,032	40,355	37,280	19,765	16,718	7,881	87	386	171,504
1970-71 . .	49,438	44,840	36,833	22,181	16,470	8,395	104	522	178,783
1971-72 . .	48,936	50,692	40,501	22,729	19,647	8,135	130	632	191,402

**PRODUCTION OF BACON AND HAM (CURED CARCASS WEIGHT): STATES  
1967-68 TO 1971-72**

(Tons)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1967-68 . .	15,134	9,340	14,103	4,110	5,128	1,281	49,096
1968-69 . .	14,748	9,872	15,189	3,998	5,417	1,394	50,618
1969-70 . .	15,947	11,891	14,068	4,607	5,678	1,381	53,572
1970-71(a)—							
(bone in) .	10,705	4,409	5,527	1,097	4,792	901	27,430
(bone out) .	4,895	8,649	5,531	3,451	1,290	537	24,351
1971-72—							
(bone in) .	10,322	3,394	4,982	1,034	4,853	743	25,328
(bone out) .	5,757	9,890	6,976	3,871	1,534	755	28,783

(a) Statistics on a bone in/bone out basis are not available prior to 1970-71.

**Consumption of pigmeat, bacon and ham**

The apparent consumption of pigmeat increased from 15.2 lb per head in 1970-71 to 17.1 lb in 1971-72.

**PRODUCTION AND DISPOSAL OF PIGMEAT (CARCASS WEIGHT): AUSTRALIA  
1967-68 TO 1971-72**

<i>Year</i>	<i>Change in stocks(a)</i>	<i>Production</i>	<i>Exports</i>	<i>Curing and canning</i>	<i>Apparent consumption (as pork or smallgoods) in Australia</i>	
					<i>Total</i>	<i>Per head per year</i>
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1967-68 . . .	+0.9	147.4	0.6	68.1	77.9	14.6
1968-69 . . .	+0.4	159.6	1.2	70.3	87.7	16.2
1969-70 . . .	-0.2	171.5	5.1	74.1	92.6	16.7
1970-71 . . .	-0.9	178.8	1.7	91.8	86.2	15.2
1971-72 . . .	+1.7	191.4	3.7	87.8	98.1	17.1

(a) Includes allowance for imports.

**PRODUCTION AND DISPOSAL OF BACON AND HAM (CURED CARCASS  
WEIGHT): AUSTRALIA, 1967-68 TO 1971-72**

<i>Year</i>	<i>Change in stocks</i>	<i>Pro- duction</i>	<i>Exports</i>	<i>Canning</i>	<i>Apparent consumption in Australia</i>	
					<i>Total</i>	<i>Per head per year</i>
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1967-68 . .	+0.1	49.1	0.2	7.7	41.1	7.7
1968-69 . .	..	50.6	0.2	8.1	42.4	7.8
1969-70 . .	+0.3	53.6	0.2	7.3	45.8	8.3
1970-71 . .	..	66.2	0.3	8.1	57.8	10.2
1971-72 . .	+0.1	63.3	0.3	7.9	55.0	9.6

## Exports of pigs and pig products

## EXPORTS OF PIGS AND PIG PRODUCTS: AUSTRALIA, 1969-70 TO 1971-72

		Quantity			Value (\$'000 f.o.b.)		
		1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Bacon and ham (including canned)	'000 lb	572	877	846	415	593	604
Lard	'000 lb	35	231	32	6	23	7
Frozen pork	'000 lb	11,358	3,808	11,384	4,050	1,425	2,776
Pigs, live	number	933	1,877	1,811	47	107	97

## The poultry industry

Once part of the mixed farming sector, the poultry industry is now a highly specialised and distinct industry. The bulk of production is obtained from this commercial source, though many farm households and some private homes in suburban areas keep poultry to supply their domestic needs and some supplies from this source are also marketed. Because the data from this latter sector is incomplete, details of poultry numbers throughout Australia are not published. There is an increasing tendency for specialisation within the industry into hatcherymen, egg producers and broiler producers. These sectors of the industry each have separate statistics. There are also separate research schemes for the egg and meat chicken industries. Both sectors are good examples of the general movement towards specialised, large scale capital intensive production which is common to all rural industries.

## Stabilisation scheme for the egg industry

A Commonwealth industry stabilisation scheme for the egg industry has been in operation since 1 July 1965. The principal features of the scheme are embodied in three Commonwealth Acts—*Poultry Industry Levy Act 1965-1966*, *Poultry Industry Levy Collection Act 1965-1966*, and *Poultry Industry Assistance Act 1965-1966*.

The scheme provides for the imposition of a levy on hens over six months of age kept for commercial purposes. The money obtained from the levy is used to meet trading losses on surplus eggs. Previously, returns to producers were equalised by State Egg Boards, who imposed an equalisation deduction to cover deficits which resulted from sales to overseas markets.

In determining the rate of the hen levy, the Minister for Primary Industry is required to take into consideration any recommendations by the Council of Egg Marketing Authorities of Australia (which consists of all members of the State Egg Marketing Boards) and is precluded from prescribing a rate in excess of such recommendations. The maximum rate of levy permitted under the legislation is \$1 per hen per annum. The levy is payable fortnightly by the owner of the hen. The levy operated at its maximum in 1970-71 and 1971-72. The fortnightly rate of levy in accordance with the recommendations of the Council of Egg Marketing Authorities of Australia was 4 cents for the first 24 fortnights of 1970-71 and 2 cents per fortnight for the remaining two fortnights. The rate of levy for 1971-72 reverted to 4 cents except for the last fortnight of 1971-72 when no levy was imposed.

Exemptions from payment are granted on the first twenty hens in each flock and also on a substantial proportion of broiler breeder hens. The eggs produced by broiler breeder hens which are not used for hatching determine the proportion of those hens on which the levy becomes payable in accordance with a formula incorporated in the legislation.

By arrangement between the Commonwealth and State Governments, the State Egg Boards collect the levy due in each State from individual producers and remit the total amount to the Commonwealth (the Department of Primary Industry collects the levy in the Australian Capital Territory). The Commonwealth Government pays into the Poultry Industry Trust Fund amounts equal to the receipts obtained from the hen levy. These amounts totalled \$12,991,000 in 1971-72 (\$12,755,000 in 1970-71). Payments from the Fund are made to the State Governments for financial assistance to the poultry industry, and are authorised by the Minister for Primary Industry, after consideration has been given to the recommendations by the Council of Egg Marketing Authorities of Australia. Payments from the Trust Fund totalled \$13,225,000 in 1971-72 (\$12,505,000 in 1970-71).

## Research

The *Poultry Industry Assistance Act 1965-1966* permits expenditure from the Poultry Industry Trust Fund to be made for research. The Commonwealth Government has agreed to match expenditure from this Fund on a \$1 for \$1 basis with a limit to its contribution of \$100,000 per annum. There is no restriction on the amount which may be expended from the Fund for research purposes.



Research projects are recommended by the Council of Egg Marketing Authorities of Australia for approval by the Minister for Primary Industry. Expenditure may be approved for scientific, technical or economic research, the publication of reports thereon, the training of persons for research, and the dissemination of information and advice on scientific, technical or economic matters.

### Chicken Meat Research

In June 1969, a research scheme for the chicken meat industry was established along lines similar to those operating for the wool, wheat, dairy, meat, tobacco and poultry industries. The operative Acts are the *Chicken Meat Research Act*, 1969, the *Meat Chicken Levy Act*, 1969 and the *Meat Chicken Collection Act*, 1969. This legislation provides for a levy of one-tenth of a cent on each meat chicken hatched before 1 July 1972 and, thereafter, for a levy at a prescribed rate not exceeding one-quarter of a cent per meat chicken hatched. Hatcheries, hatching less than 20,000 meat chickens per annum, are exempt from the levy. The legislation also provides that the industry levy be paid into a Trust Account and that research expenditure therefrom be matched on a \$1 for \$1 basis by the Commonwealth. On this basis, it is estimated that funds currently available for research will be approximately \$240,000 per annum.

### Marketing of eggs

Details of the *Egg Export Control Act* 1947-1966 were given in earlier issues of the Year Book (see No. 47, page 997).

### Chicken hatching and poultry slaughterings

Statistics shown in the following section have been compiled on a Commonwealth basis since 1965-66 from returns supplied by commercial chicken hatcheries (i.e. those making sales of day-old chicks) and by commercial poultry slaughtering establishments. Poultry farmers hatching chicks solely for replenishing their own flocks, producers in the Northern Territory and the many very small producers are excluded from the collection. However, the statistics represent a high level of coverage in respect of commercial hatcheries and slaughtering establishments.

### Poultry slaughtered for human consumption

No allowance has been made in the following figures for interstate movement of dressed poultry or changes in stocks held, and figures therefore do not necessarily represent the level of consumption in the States concerned.

Statistics for poultry slaughtered in Queensland are based on numbers slaughtered as collected by the Queensland Department of Primary Industries. From 1968-69, New South Wales slaughtering statistics include poultry slaughterings by producers in the Australian Capital Territory. Prior to that year, Australian Capital Territory slaughtering statistics were not collected.

NUMBERS OF POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION  
1967-68 TO 1971-72  
(’000)

Year	Chickens(a)	Other fowls(b)	Ducks and drakes	Turkeys
1971-72				
New South Wales . . .	51,632	3,816	913	1,172
Victoria . . . . .	23,345	2,140	322	147
Queensland . . . . .	15,525	1,509	43	9
South Australia . . .	9,887	502	45	10
Western Australia . .	11,504	698	(c)	(c)
Tasmania . . . . .	1,402	139	(c)	(c)
<b>Australia . . . . .</b>	<b>113,298</b>	<b>8,803</b>	<b>1,356</b>	<b>1,353</b>
1970-71 . . . . .	103,907	7,581	1,214	1,440
1969-70 . . . . .	84,644	6,681	968	1,331
1968-69 . . . . .	75,174	6,025	1,010	916
1967-68 . . . . .	76,361	5,403	790	660

(a) Comprises broilers, fryers and roasters.  
available for publication.

(b) Comprises hens, roosters, etc.

(c) Not

**DRESSED WEIGHT OF POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION(a)**  
**1967-68 TO 1971-72**  
('000 lb)

<i>Year</i>	<i>Chickens(b)</i>	<i>Other fowls(c)</i>	<i>Ducks and drakes</i>	<i>Turkeys</i>	<i>Total</i>
1971-72—					
New South Wales . . .	143,652	13,422	3,309	9,430	169,813
Victoria . . . . .	66,414	7,685	1,080	1,225	76,404
Queensland(d) . . . .	45,062	5,727	142	59	50,990
South Australia . . . .	24,420	1,763	184	101	26,469
Western Australia . . .	29,388	2,623	(e)	(e)	32,202
Tasmania . . . . .	3,462	454	(e)	(e)	4,021
<b>Australia . . . . .</b>	<b>312,397</b>	<b>31,674</b>	<b>4,875</b>	<b>10,953</b>	<b>359,899</b>
1970-71 . . . . .	288,909	27,300	4,560	13,272	334,041
1969-70 . . . . .	232,432	23,891	3,605	13,101	273,029
1968-69 . . . . .	206,651	21,875	3,849	8,335	240,709
1967-68 . . . . .	197,350	19,671	3,099	6,363	226,482

(a) Dressed weight of all birds, including pieces and giblets, as reported in all States except Queensland. (b) Comprises dressed weight of broilers, fryers and roasters. (c) Comprises dressed weight of hens, roosters, etc. (d) Estimated. (e) Not available for publication.

**Chicken hatchings in commercial hatcheries**

Details contained in the following tables relate to all eggs set and to chicks hatched in commercial hatcheries whether for sale as day-old chicks or for replenishment of own flocks.

**NUMBER OF EGGS SET(a) IN COMMERCIAL HATCHERIES: STATES, 1967-68 TO 1971-72**  
('000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
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**MEAT STRAINS**

1967-68 . . . . .	54,270	20,655	17,969	7,407	(b)	(b)	112,484
1968-69 . . . . .	51,667	20,120	18,381	6,546	(b)	(b)	109,832
1969-70 . . . . .	60,438	21,946	20,233	8,090	(b)	(b)	124,529
1970-71 . . . . .	76,536	29,401	23,127	11,891	(b)	(b)	158,953
1971-72 . . . . .	73,707	35,097	21,647	13,253	(b)	(b)	161,645

**EGG STRAINS**

1967-68 . . . . .	19,510	12,578	8,823	5,060	3,256	1,024	50,251
1968-69 . . . . .	19,971	13,104	8,909	5,049	3,660	904	51,597
1969-70 . . . . .	22,447	14,440	9,925	5,971	3,665	1,206	57,654
1970-71 . . . . .	19,333	15,343	9,971	5,885	4,444	849	55,827
1971-72 . . . . .	18,238	14,251	10,755	4,933	3,606	977	52,759

(a) Includes eggs which failed to hatch. (b) Not available for publication.

**CHICKENS HATCHED(a) IN COMMERCIAL HATCHERIES: STATES, 1967-68 TO 1971-72**  
(<sup>'000</sup>)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>INTENDED FOR CHICKEN MEAT—MEAT STRAINS</b> (Unsexed)							
1967-68 . .	37,629	15,806	13,456	5,218	(b)	(b)	80,874
1968-69 . .	35,563	15,546	13,765	5,053	(b)	(b)	79,538
1969-70 . .	41,464	17,334	14,882	6,173	(b)	(b)	89,835
1970-71 . .	54,462	22,105	16,548	9,101	(b)	(b)	114,999
1971-72 . .	54,209	26,951	16,360	10,431	(b)	(b)	121,563

**INTENDED FOR CHICKEN MEAT—EGG STRAINS**  
(Crossbred and other cockerels)(c)

1967-68 . .	1,545	1,567	759	134	105	43	4,153
1968-69 . .	1,191	880	457	180	66	19	2,794
1969-70 . .	1,846	1,462	431	373	58	7	4,177
1970-71 . .	975	1,096	464	300	52	19	2,906
1971-72 . .	517	431	507	117	49	50	1,670

**INTENDED FOR EGG PRODUCTION—EGG STRAINS**  
(Pullets)(c)

1967-68 . .	6,093	4,251	2,862	1,904	1,143	371	16,624
1968-69 . .	6,310	4,455	2,922	1,854	1,246	299	17,085
1969-70 . .	7,110	4,977	3,169	2,136	1,314	408	19,115
1970-71 . .	6,325	5,350	3,176	2,125	1,560	268	18,803
1971-72 . .	5,889	4,861	3,484	1,876	1,268	302	17,680

(a) Excludes chicks destroyed. (b) Not available for publication. (c) Includes (for States other than Queensland) a proportion of unsexed egg strain chicks.

**Recorded production of eggs and egg products**

Statistics of the production and disposal of eggs in Australia are recorded by the Australian Egg Board and the Egg Marketing Board of New South Wales. Details of production as recorded by these authorities are shown in the following table.

**SHELL EGGS: PRODUCTION(a) RECORDED BY EGG BOARDS**  
**STATES, 1967-68 TO 1971-72**  
(<sup>'000</sup> dozen)

<i>State</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
New South Wales(b) . . . .	74,682	76,062	82,021	89,663	91,100
Victoria . . . . .	38,231	41,147	47,613	53,339	55,518
Queensland . . . . .	21,393	20,854	23,837	25,305	25,031
South Australia . . . . .	15,813	15,692	16,655	19,440	20,515
Western Australia . . . . .	11,583	11,491	12,716	14,501	16,897
Tasmania . . . . .	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total(c) . . . . .</b>	<b>161,702</b>	<b>165,247</b>	<b>182,842</b>	<b>202,249</b>	<b>209,061</b>

(a) Receipts from consignors and sales by producer agents. (b) Includes Australian Capital Territory. (c) Excludes Tasmania.

Particulars of the production of whole egg pulp as recorded by the Egg Marketing Board for the State of New South Wales and by the Australian Egg Board for the other States are shown in the following table.



**LIQUID WHOLE EGG PULP: PRODUCTION RECORDED BY EGG BOARDS  
STATES, 1967-68 TO 1971-72**  
(<sup>0</sup>000 lb)

<i>State</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
New South Wales . . . . .	14,532	15,691	22,009	28,488	22,777
Victoria . . . . .	8,841	10,093	13,930	18,373	20,110
Queensland . . . . .	7,877	5,288	7,988	7,582	6,072
South Australia . . . . .	7,024	5,370	6,074	8,137	9,206
Western Australia . . . . .	1,802	1,510	1,964	2,982	5,384
Tasmania . . . . .	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total(a)</b> . . . . .	<b>40,076</b>	<b>37,952</b>	<b>51,965</b>	<b>65,562</b>	<b>63,549</b>

(a) Excludes Tasmania.

In addition to liquid whole egg, production was also recorded for liquid egg whites and liquid egg yolks. Output in 1971-72 amounted to 12,489,000 lb and 9,008,000 lb respectively, compared with 8,329,000 lb and 5,699,000 lb respectively, in the previous year. These figures exclude small quantities produced in Tasmania for which details are not available.

**Consumption of eggs and egg products**

Because of the operation of producers outside the control of the Egg Boards and the extent of 'back-yard' poultry-keeping, for which no statistics are collected, figures relating to total egg production must be accepted with some reserve. The production shown in the following table, together with details of exports and consumption, is based upon the records of Egg Boards for production from areas under their control, plus estimates of production from uncontrolled areas and from 'back-yard' poultry-keepers.

**ESTIMATED PRODUCTION AND DISPOSAL OF EGGS IN SHELL  
AUSTRALIA, 1967-68 TO 1971-72**

<i>Year</i>	<i>Change in stocks</i>	<i>Estimated total production</i>	<i>Exports(a)</i>	<i>For drying and pulp(b)</i>	<i>Apparent consumption in Australia</i>	
					<i>Total</i>	<i>Per head per year</i>
	<i>mil. doz</i>	<i>mil. doz</i>	<i>mil. doz</i>	<i>mil. doz</i>	<i>mil. doz</i>	<i>doz</i>
1967-68 . . . . .	-0.3	253.3	6.5	42.3	204.7	17.2
1968-69 . . . . .	-0.1	257.4	7.6	41.0	208.9	17.2
1969-70 . . . . .	..	272.4	5.1	53.6	213.6	17.2
1970-71 . . . . .	+0.2	287.0	5.1	64.8	216.9	17.2
1971-72 . . . . .	+0.4	296.1	6.9	67.9	220.9	17.2

(a) Includes ships' stores. (b) Includes wastage.

Details of the annual consumption of shell eggs, liquid whole egg and total shell egg equivalent per head of population are shown in the following table.

**SUPPLIES OF EGGS AND EGG PRODUCTS AVAILABLE  
FOR CONSUMPTION: AUSTRALIA, 1967-68 TO 1971-72**  
(Per head per year)

<i>Year</i>	<i>Eggs in shell</i>	<i>Liquid whole egg and egg powder(a)</i>	<i>Total</i>	
			<i>Number</i>	<i>Weight(b)</i>
	<i>number</i>	<i>number</i>		<i>lb</i>
1967-68 . . . . .	206	14	221	27.6
1968-69 . . . . .	206	14	220	27.5
1969-70 . . . . .	206	14	220	27.5
1970-71 . . . . .	206	14	220	27.5
1971-72 . . . . .	206	14	220	27.5

(a) In terms of number of eggs in shell. Australia is taken as 2 oz.

(b) The average weight of an egg in

**Overseas trade in poultry products**

Australian exports of shell eggs in 1971-72 amounted to 5,909,000 dozen compared with 3,990,000 dozen in 1970-71. The main outlets for Australian eggs in 1971-72 were Hong Kong (1,713,000 dozen), Kuwait (1,029,000 dozen), the Union of Arab Emirates (1,238,000 dozen), and Bahrain (600,000 dozen).

**EXPORTS OF POULTRY PRODUCTS: AUSTRALIA  
1969-70 TO 1971-72**

		Quantity			Value (\$'000 f.o.b.)		
		1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Eggs in shell . . .	'000 doz	3,956	3,990	5,909	987	1,038	1,455
Eggs not in shell—							
In liquid form . . .	'000 lb	38,493	43,129	36,554	6,211	7,052	6,261
Dry . . .	'000 lb	125	842	669	94	357	380
Frozen poultry . . .	'000 lb	3,682	5,168	6,915	1,098	1,504	2,077
Poultry, live(a) . . .	number	418,987	369,821	369,589	125	161	173

(a) Includes day-old chicks.

Imports of canned poultry in 1971-72 amounted to 273,000 lb, valued at \$76,000, compared with 470,000 lb, valued at \$116,000, in 1970-71.

**The bee-farming industry****Production of honey and bees-wax**

Although practised as a separate industry, bee-farming is also carried on in conjunction with other branches of farming. A feature of the industry is that it consists mainly of itinerant apiarists operating on a large scale with mobile equipment. Some of these apiarists move as far afield as from Victoria to Queensland in an endeavour to provide a continuous supply of nectar from flora suitable for their bees. Production of honey in 1971-72 amounted to 44,621,000 lb (116.2 lb per productive hive) compared with 42,165,000 lb (112.3 lb per productive hive) in 1970-71. Bees-wax produced in 1971-72 was 582,000 lb compared with 587,000 lb in the previous year.

In the following tables, statistics for 1971-72 for each State are confined to apiarists with five or more hives, except in New South Wales where details relate to beekeepers with six or more hives.

**BEEHIVES, HONEY AND BEES-WAX: STATES AND A.C.T., 1971-72**

State or Territory	Beehives(a)			Honey produced		Bees-wax produced	
	Pro- ductive	Unpro- ductive	Total	Quantity	Gross value	Quantity	Gross value
	'000	'000	'000	'000 lb	\$'000	000 lb	\$'000
New South Wales . . .	151	55	206	18,900	2,627	235	132
Victoria . . .	68	38	106	4,783	793	53	32
Queensland . . .	48	21	69	4,447	568	60	27
South Australia . . .	73	14	87	9,428	1,287	133	77
Western Australia . . .	34	9	42	6,110	685	86	44
Tasmania . . .	10	3	12	874	159	14	7
Australian Capital Terri- tory . . .	1	1	1	77	17	1	1
<b>Australia . . .</b>	<b>384</b>	<b>139</b>	<b>524</b>	<b>44,621</b>	<b>6,136</b>	<b>582</b>	<b>320</b>

(a) At 30 June 1972.

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora, particularly the eucalypts, which varies greatly from year to year.

**HONEY AND BEES-WAX PRODUCTION: STATES AND A.C.T., 1967-68 TO 1971-72**  
(<sup>0</sup>000 lb)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>HONEY</b>								
1967-68 . . .	21,014	7,580	4,116	6,844	3,410	841	153	43,958
1968-69 . . .	10,654	3,638	1,718	5,770	6,553	671	78	29,081
1969-70 . . .	18,731	8,220	3,144	10,638	7,409	821	109	49,072
1970-71 . . .	17,456	9,804	3,773	7,032	3,025	1,002	74	42,165
1971-72 . . .	18,900	4,783	4,447	9,428	6,110	874	77	44,621
<b>BEES-WAX</b>								
1967-68 . . .	281	92	66	105	49	13	2	609
1968-69 . . .	145	50	32	92	94	11	1	425
1969-70 . . .	254	103	49	157	99	13	1	676
1970-71 . . .	241	120	58	102	52	14	1	587
1971-72 . . .	235	53	60	133	86	14	1	582

**Honey levy**

A levy is imposed on domestic sales of honey for the purposes of financing the operations of the Australian Honey Board. The current rate of levy which became effective on 1 November 1971, is, five-tenths of a cent per lb, but under the provisions of the *Honey Levy Act* 1962-65, it can be increased by regulation to a maximum of one cent per lb. The proceeds of this levy may be expended on the regulation of Australian exports of honey and on associated promotional and research activities. In 1969-70, 1970-71 and 1971-72, collections amounted to \$103,000, \$108,000 and \$122,000 respectively. The sum made available for research (\$5,000 per annum in recent years) is matched by the Commonwealth with funds from the Special Research Grant.

**Overseas trade in bee products**

The principal importer of Australian honey in 1971-72 was the United Kingdom, accounting for 43.8 per cent, by value, of total exports.

Bees-wax was exported mainly to the United Kingdom and Japan in 1971-72.

**EXPORTS OF HONEY AND BEES-WAX: AUSTRALIA, 1969-70 TO 1971-72**

	<i>Quantity (<sup>0</sup>000 lb)</i>			<i>Value (\$<sup>0</sup>000 f.o.b.)</i>		
	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Honey . . . . .	14,695	22,076	19,475	1,775	3,051	3,633
Bees-wax . . . . .	250	345	213	166	218	135

**Value of dairy, poultry and bee-farming production****Value of dairy, poultry and bee-farming production**

Value of dairy, poultry and bee-farming production for 1971-72 and earlier years are shown in the following tables. Further information on values, including definitions of the terms used, is given in Chapter 29 Miscellaneous.



**GROSS VALUE OF DAIRY, POULTRY AND BEE-FARMING PRODUCTION: AUSTRALIA**  
**1967-68 TO 1971-72**  
 (\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>DAIRYING</b>					
Whole milk used for—					
Butter(a) . . . . .	134,089	148,148	172,762	156,798	176,897
Cheese(a) . . . . .	31,148	29,994	29,344	30,825	35,119
Processed milk products . . . . .	23,084	23,245	23,075	28,812	34,054
Other purposes . . . . .	154,280	154,547	161,283	170,487	177,640
Subsidy paid on whole milk for—					
Butter . . . . .	24,100	23,313	23,581	37,200	34,204
Cheese . . . . .	2,900	3,687	3,419	5,682	5,796
<i>Total, whole milk (including subsidy)</i> . . . . .	369,602	382,935	413,466	429,805	463,710
Pigs slaughtered . . . . .	89,598	86,842	96,066	104,992	111,199
Dairy cattle slaughtered . . . . .	44,849	43,967	37,703	32,191	32,413
<b>Total dairying</b> . . . . .	<b>504,050</b>	<b>513,742</b>	<b>547,239</b>	<b>566,989</b>	<b>607,323</b>
<b>POULTRY</b>					
<b>Total poultry</b> . . . . .	<b>169,342</b>	<b>176,167</b>	<b>184,401</b>	<b>195,322</b>	<b>200,715</b>
<b>BEE-FARMING</b>					
Honey . . . . .	4,259	2,760	4,427	4,362	6,136
Bees-wax . . . . .	367	259	397	337	320
<b>Total bee-farming</b> . . . . .	<b>4,627</b>	<b>3,021</b>	<b>4,824</b>	<b>4,702</b>	<b>6,456</b>

(a) Excludes Commonwealth\*subsidy which is shown separately.

**GROSS, LOCAL AND NET VALUE OF DAIRY PRODUCTION**  
**STATES AND TERRITORIES, 1971-72**  
 (\$'000)

State or Territory	Gross production valued at principal markets	Marketing costs	Local value of production	Value of materials used in process of production	Net value of production (a)
New South Wales . . . . .	156,621	13,790	142,831	(b)21,130	121,700
Victoria . . . . .	266,880	17,068	249,812	38,368	211,444
Queensland . . . . .	75,630	4,623	71,007	7,764	63,243
South Australia . . . . .	47,262	1,052	46,210	14,047	32,163
Western Australia . . . . .	28,262	1,593	26,668	16,744	9,924
Tasmania . . . . .	32,103	905	31,198	4,426	26,772
Northern Territory . . . . .	175	n.a.	175	n.a.	175
Australian Capital Territory . . . . .	390	19	370	90	280
<b>Australia</b> . . . . .	<b>607,323</b>	<b>39,050</b>	<b>568,271</b>	<b>102,569</b>	<b>465,701</b>

(a) No deduction has been made for depreciation and maintenance. (b) No allowance has been made for costs of power, power kerosene, petrol and other oils.

**Indexes of quantum and price of dairy, poultry and bee-production**  
 For details of these indexes see Chapter 29, Miscellaneous.



## CHAPTER 23

# WATER CONSERVATION AND IRRIGATION

## RESOURCES, UTILISATION AND NATIONAL AND INTERSTATE ASPECTS

Official Year Book No. 51, pages 228-31, contains a description of recent developments in the measurement of Australia's water resources. For information concerning general, descriptive and historical matter *see also* Year Book No. 37, pages 1096-1141.

An article on droughts in Australia appeared in Year Book No. 54, pages 991-6.

For further details on geographical and climatic features determining the Australian water pattern, *see* the chapter Physical Geography and Climate; on water supply and sewerage in metropolitan areas, cities and towns, the chapter Public Finance; and on the generation of hydro-electric power, the chapter Electric Power Generation and Distribution, of this issue.

A series of maps showing the location of major dams and reservoirs and the various irrigation schemes operating in each of the States may be found on pages 259-65 of Year Book No. 46, and a map showing the extent of known artesian basins throughout Australia is shown on page 273 of Year Book No. 48.

### Water resources and their utilisation

#### Surface supplies

An assessment of Australia's surface water resources has been made, based on measured and estimated stream flows within 197 river basins, as follows. The total average annual discharge of Australian rivers has been assessed at 280 million acre feet. This can be divided into 108 million acre feet measured discharge and 172 million acre feet estimated for areas where there are generally no gauging records. For the whole area of Australia (approximately 3 million square miles) only 1.9 million square miles are regarded as contributing to stream flow (i.e. there is practically no flow from Western Plateau drainage division and from arid parts of other divisions).

The flow of Australian rivers is small in comparison with the flow of rivers in other continents, some examples of which, expressed as mean annual discharges in millions of acre feet, are: Amazon, 2,950; Mississippi, 465; Mekong, 405; Niger, 308; Volga, 205; and the ten major rivers of the United States of America in the aggregate, 900.

#### Major dams and reservoirs

The table below lists existing major dams and reservoirs, together with those under construction and those projected, at June 1972. The list is confined to dams and reservoirs with a capacity of 100,000 acre feet or more. There are many others of smaller capacity in Australia. As a general rule, the figures shown for the height of wall (feet) refer to the vertical distance measured from the lowest point of the general foundations to the 'crest' of the dam, i.e. the level of the roadway or walkway on the dam.

#### MAJOR DAMS AND RESERVOIRS IN AUSTRALIA

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
EXISTING DAMS AND RESERVOIRS				
Lake Argyle (Ord River)	Near Wyndham, Western Australia	4,600,000	323	For irrigation. Flood storage capacity above full supply level is 28,000,000 acre feet
Eucumbene	Eucumbene River, New South Wales	3,890,000	381	Part of Snowy Mountains Hydro-electric Scheme
Eildon	Upper Goulburn River, Victoria	2,750,000	260	Storage for irrigation and for the generation of electricity
Hume	Murray River, near Albury, New South Wales	2,480,000	167	Part of Murray River Scheme—Storage for domestic, stock and irrigation purposes. Hydro-electric power also developed
Miena	Great Lake, Tasmania	1,710,000	60	Storage for Poatina hydro-electric power station



MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued*

<i>Name</i>	<i>Location</i>	<i>Capacity (acre feet)</i>	<i>Height of wall (feet)</i>	<i>Remarks</i>
<b>EXISTING DAMS AND RESERVOIRS—<i>continued</i></b>				
Warragamba . . .	Warragamba River, New South Wales	1,670,000	450	For Sydney water supply. Also provides for generation of hydro-electricity
Menindee Lakes Storage	Darling River, near Menindee, New South Wales	1,468,700	60	Part of Darling River Water Conservation Scheme
Burrendong . . .	Macquarie River, near Wellington, New South Wales	1,361,000	250	Storage for rural water supplies and flood mitigation
Blowering . . .	Tumut River, New South Wales	1,322,400	368	For regulation of discharges from stations of Snowy Mountains Hydro-electric Scheme, primarily for irrigation but also for hydro-electric power generation
Wyangala . . .	Lachlan River, New South Wales	987,000	280	Storage for domestic stock, and irrigation purposes
Burrinjuck . . .	Murrumbidgee River, New South Wales	837,000	264	Storage primarily for irrigation also production of hydro-electric power
Talbingo . . .	Tumut River, New South Wales	747,000	530	Part of Snowy Mountains Hydro-electric Scheme
Somerset . . .	Stanley River, Queensland	735,000	173	Brisbane-Ipswich water supply, flood mitigation and small hydro-electric power station
Jindabyne . . .	Snowy River, New South Wales	558,000	235	Part of Snowy Mountains Hydro-electric Scheme
Lake Victoria . . .	Murray River, near South Australian border, in New South Wales	551,700	..	Natural off-river storage for irrigation in South Australia. Storage improved by construction of embankments and control regulators
Lake Echo . . .	Lake Echo, Tasmania	442,000	60	Storage for Lake Echo hydro-electric power station (and seven others downstream)
Clark . . .	Derwent River, Tasmania	434,000	220	Storage for Butler's Gorge and Tarraleah hydro-electric power stations (and six others downstream)
Keepit . . .	Namoi River, near Gunnedah, New South Wales	345,300	177	Storage primarily for irrigation also production of hydro-electric power
Arthur Lakes . . .	Source of Lake River, near Great Lake, Tasmania	343,000	50	Part of Great Lake hydro-electric power development
Waranga . . .	Goulburn River, Victoria	333,400	45	For irrigation storage
Tinaroo Falls . . .	Barron River, North Queensland	330,000	155	For irrigation purposes in the Mareeba-Dimbulah area
Mokoan . . .	Winton Swamp, near Benalla, Victoria	300,000	35	For irrigation storage
Glenbawn . . .	Hunter River, near Scone, New South Wales	293,200	251	Storage for irrigation purposes and flood mitigation
Rocklands . . .	Glenelg River, Victoria	272,000	93	Part of Wimmera-Mallee domestic and stock water supply system
Eppalock . . .	Campaspe River, near Heathcote, Victoria	252,860	150	To supplement supply to Bendigo and for irrigation
Tantangara . . .	Murrumbidgee River, New South Wales	206,000	148	Part of Snowy Mountains Hydro-electric Scheme
Devils Gate . . .	Mersey River, North Tasmania	190,000	250	Storage for Mersey Forth power development
Avon . . .	Avon River, New South Wales	173,800	232	Part of Sydney water supply
Upper Yarra . . .	Yarra River, Victoria	162,000	293	For Melbourne water supply
Wuruma . . .	Nogo River, Central Queensland	157,000	151	For irrigation along Burnett River
Glenmaggie . . .	Gippsland, Victoria	154,300	121	Storage for irrigation
Lake St Clair . . .	Central Highlands, Tasmania	154,200	..	Improved natural storage for eight Derwent River hydro-electric power stations
Wellington . . .	Collie River, Western Australia	150,100	121	For supply of water to irrigation districts and to agricultural areas and country towns
Grahamstown . . .	Grahamstown River, near Newcastle, New South Wales	147,000	35	To supplement supply to Newcastle and district
Koombooloomba . . .	Tully River, North Queensland	146,000	170	For hydro-electric and irrigation purposes
Serpentine . . .	Serpentine River, Western Australia	144,000	171	For Perth water supply
Cethana . . .	Mersey River, North Tasmania	143,000	360	Storage for Mersey Forth power development
Lake Brewster . . .	Lachlan River, near Hillston, New South Wales	123,900	..	Storage of rural water supplies for the lower Lachlan
Cairn Curran . . .	Loddon River, Victoria	120,600	144	For irrigation storage
Rowallan . . .	Mersey River, North Tasmania	110,000	140	Storage for Mersey Forth power development
Eungella . . .	Broken River, North Queensland	106,000	146	Provision of cooling water for Collinsville power station, supply to Collinsville town and for irrigation purposes

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued*

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
<b>DAMS AND RESERVOIRS UNDER CONSTRUCTION</b>				
Lakes Gordon and Pedder	South-west Tasmania:			
	Gordon River . . . . .	9,600,000	460	Storage for Gordon River power development
	Serpentine River . . . . .	2,286,080	126	
	Scotts Peak . . . . .		140	
	Lake Edgar . . . . .		50	
Dartmouth . . . . .	Mitta Mitta River in North-Eastern Victoria	3,000,000	590	Additional regulation of Upper Murray flow to secure River Murray irrigation development. Hydro-electric power also to be developed.
Fairbairn . . . . .	Nogoa River, Central Queensland	1,170,000	145	Storage for the Emerald Irrigation Area
Copeton . . . . .	Gwydir River, New South Wales	1,105,000	357	For irrigation storage
Monduran . . . . .	Kolan River, near Gin Gin, Queensland	475,000	166	For irrigation storage
Ross River . . . . .	Near Townsville, Queensland	338,000	115	Flood mitigation and water supply to Townsville (First and Second Stages)
Cardinia . . . . .	Near Emerald, Victoria	234,000	270	For off river storage for Melbourne water supply
Darwin River Dam . . . . .	Near Darwin . . . . .	210,000	100	Darwin Water Supply
South Dandalup . . . . .	Dandalup River, Western Australia	168,500	140	For Perth water supply

## DAMS AND RESERVOIRS PROJECTED

Buffalo (second stage) . . . . .	Buffalo River, near Myrtleford, Victoria	800,000	260	For irrigation storage
Warkworth . . . . .	Wollombi Brook, Hunter Valley, New South Wales	406,000	130	Flood mitigation and irrigation dam for Hunter Valley
Windamere . . . . .	Cudgegong River, New South Wales	280,000	200	For irrigation storage
Pike Creek . . . . .	Near Stanthorpe, Queensland	212,000	190	For irrigation, part of Dumaresq-Barwon Border Rivers Scheme
North Pine . . . . .	North Pine River, near Petrie, Queensland	164,000	142	To supplement supply to northern Brisbane area
Tallowa . . . . .	Shoalhaven River and Kangaroo River Junction, New South Wales	120,000	140	Water supply and pumped storage power development
Julius . . . . .	Leichardt River, near Mt. Isa, Queensland	100,000	115	Water supply to Mt. Isa mines, city and other mining development

**Irrigation**

For some brief remarks on the history of irrigation in Australia see issues of the Year Book prior to No. 39. An article on the conservation and use of water in Australia appeared in Year Book No. 37, page 1096 and subsequent developments have been covered in later numbers of the Year Book.

**Irrigation research**

Comprehensive programs of research and investigation are being pursued by State water and agricultural authorities and the Commonwealth Scientific and Industrial Research Organization, often in collaboration. Special attention is being given to the following: high water tables due to the application of water; surface accumulation of salt and other soil changes associated with irrigation; methods of applying water efficiently; soil treatments to improve the physical condition of irrigated heavy clay soils; the utilisation of irrigated pastures by stock; and growth problems affecting plants and trees and reduction of salinity in river systems.

The Commonwealth Scientific and Industrial Research Organization conducts research on irrigation and irrigated crops at a number of its research stations and laboratories. The Division of Irrigation Research at Griffith (New South Wales), is investigating ways of limiting the degradation of land by irrigation, improving the quality and range of irrigated crops, and assessing the amount of water required by irrigated crops and the most economical means of applying it. The crops being studied include citrus, cotton, rice, lucerne and vegetables. Design criteria for irrigation channel networks are being studied to help solve problems related to the transient flow in natural and artificial channel systems. The Division of Environmental Mechanics at Canberra (Australian Capital Territory) studies water movement in soils, evaporation from field crops, water movement in plants and the physics of water stress. Summer forage crops, winter legume crops and irrigated pastures are

being investigated by the Division of Plant Industry at Swan Coastal Plain (Western Australia). Salt tolerant rootstocks for grape vines and other problems of grapes and pome fruits are being evaluated at Merbein (Victoria) and Adelaide (South Australia) by the Division of Horticultural Research. The Division of Land Research conducts research on a number of irrigated crops, including rice, safflower, linseed and cotton at the Kimberley Research Station (Western Australia) and tobacco at Mareeba (Queensland). The Division has also carried out a number of hydrological investigations on the utilisation of underground water for irrigation and is studying infiltration characteristics of soils. The Division of Applied Geomechanics is studying the engineering aspects of water movement through earth embankments. The Division of Soils is studying the rate of recharge of aquifers in the south-east of South Australia and the effect that the type of plant cover (grassland or forest) has upon that rate. This Division is also looking at the effect that clearing has upon the salinity of water obtained from catchments in the south-west of Western Australia.

The Irrigation Research and Extension Committee plays an important part in the agricultural activity of the Murrumbidgee Irrigation areas and associated districts, and the Coleambally Irrigation Area. It is representative of the New South Wales Department of Agriculture, the Commonwealth Scientific and Industrial Research Organization, the Rural Bank of New South Wales, the Soil Conservation Service of New South Wales, the Water Conservation Service of New South Wales, the Rice Marketing Board of New South Wales, the Wine Grape Marketing Board of New South Wales, co-operative and secondary industries, and farmers' organisations. Finance is provided by these authorities on an agreed basis. The objectives are: to enable the agricultural extension services to the farmers in the defined sub-region to be continued and developed; to provide a system for advising on local agricultural policy and organisation; to provide means for farmer opinion to have due weight in the consideration of regional agricultural administration and policy; to achieve a unified approach to sub-regional extension in all branches of agriculture; to advise on the research needs of the sub-region and to co-ordinate the agricultural research of the various rural institutions working therein; to achieve close liaison between research and extension; and to conduct research in extension methods.

Two other organisations with similar objectives are the Victorian Irrigation Research and Promotion Organisation which operates from Shepparton, and the Murray Research and Extension Committee centred at Deniliquin.

### Preservation of catchments

Since water conservation commences on the catchments it is becoming increasingly recognised that anything which interferes with catchment efficiency affects the quantity of water available for all purposes. Active steps are being taken to counteract soil erosion, to conserve soil generally, and to minimise the effects of floods, overstocking, bush fires, and the destruction of vegetative cover. All States and the Commonwealth have initiated forestry policies which provide for reafforestation and the preservation of catchments. In recent years efforts to counteract soil erosion have been intensified, and there is some evidence of a more unified approach to catchment, water, forestry, and land use, factors regarded as parts of a single problem.

### Sub-surface supplies

Much of Australia's underground water is obtained from artesian and sub-artesian basins and is used for stock purposes and domestic use. These supplies are indispensable in the dry areas which comprise most of the inland and extensive coastal areas as well. The quality of water ranges from usable to very saline.

Considerable use is also made of sub-surface water, other than pressure water, from localised groundwater basins, particularly in the well-settled areas. The water is used mainly for domestic and stock purposes. Compared with other countries with similar rainfall and climate, underground water is not used extensively for town and individual industrial supplies and irrigation, but its use for these purposes is increasing.

*Artesian and sub-artesian supplies.* Pressure water (either artesian or sub-artesian), variable in quantity and quality, is obtainable in many parts of Australia, from the various artesian basins extending over about half the continent.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 676,250 square miles, comprising about 421,000 in Queensland, 135,000 in South Australia, 81,250 in New South Wales and 39,000 in the Northern Territory. A table showing the principal defined water-bearing basins in Australia is shown on the following page.

More than 18,000 artesian bores have been drilled within the Great Artesian Basin, while the daily free discharge from all bores continuing to flow in Australia has been stated as exceeding 350 million gallons, of which the loss by evaporation and seepage has been estimated at more than 90 per cent. Sub-artesian bores and wells throughout Australia number more than 200,000.



Artesian water generally is good stock water, but most is unsuitable for plant life; in certain areas sub-artesian waters are suitable for all uses. Some of these areas are in the Canning, Murray, Georgian and Barkly, Perth, Ord-Victoria, Pirie-Torrens and Adelaide Basins. In the Eucla Basin and parts of the Murray and Pirie-Torrens Basins the water is of poor quality, being barely suitable for stock.

In common with other countries possessing artesian supplies, Australia has been faced with the problem of flow diminution. It was recognised early that flows were diminishing as more bores were drilled, but it is now considered that while many of these bores will ultimately cease to flow, others will assume a perpetually steady rate of flow, corresponding with the average recharge from rainfall absorbed by permeable outcrops, mainly sandstone and limestone. Diminution in flows from artesian bores has emphasised the need to eliminate wastage as much as possible. Licences issued for the construction of new artesian bores prohibit the distribution of water through drains, channels, etc., as formerly, and the supplies must be confined to the borehead or piped to appropriate watering points.

#### PRINCIPAL WATER-BEARING BASINS IN AUSTRALIA

<i>Name</i>	<i>State</i>	<i>Geological age of chief aquifers</i>	<i>Approximate area</i>	<i>Depth to pressure water</i>
			square miles	feet
Great Artesian	Queensland, New South Wales, South Australia and Northern Territory	Mesozoic	676,250	Up to 7,000
Canning	Western Australia	Mesozoic-Palaeozoic	150,000	100 to 1,800
Murray	Victoria, New South Wales and South Australia	Miocene-Eocene	109,000	100 to 1,300
Georgian (including Barkly and Daly)	Northern Territory, Queensland	Cretaceous, Ordovician, Cambrian, and Upper Proterozoic	108,000	150 to 1,000
Eucla	Western Australia, South Australia	Pliocene-Miocene	74,000	300 to 2,000
Carnarvon	Western Australia	Cretaceous, Permian	45,000	200 to 4,000
Perth	Western Australia	Recent, Jurassic	21,000	200 to 2,500
Western District (Otway)	Victoria	Pleistocene-Upper Cretaceous	13,000	100 to 4,500
Basins of Ord-Victoria region	Northern Territory, Western Australia	Mainly Cambrian, and Permian	12,000	200 to 1,000
Pirie-Torrens	South Australia	Recent, Pleistocene	9,000	Up to 600
East Gippsland	Victoria	Pleistocene-Eocene	3,500	200 to 3,500
Adelaide	South Australia	Recent, Oligocene	1,100	200 to 600

*Shallow groundwater.* Shallow groundwater supplies are used in various parts of Australia for industry, irrigation, stock, and domestic purposes. Two examples of the use of these shallow supplies for industrial and domestic purposes occur in New South Wales. The Hunter District Water Board pumps up to 15 million gallons a day (average use over 30 years is 9.2 million gallons per day) for general use from the Tomago coastal sands near Newcastle, and at Botany, Sydney, private industry pumps 8-10 million gallons a day for its own use from similar sands. Exploration of the coastal sands north of the Tomago Sands has revealed a further potential production of 25 million gallons a day. Examples of the use of shallow groundwater supplies for irrigation include the Burdekin Delta and the Bundaberg area in Queensland. In the Burdekin Delta, which covers an area of some 200 square miles, the present extraction for irrigation from underground sources is in the region of 200,000 acre feet per annum (about 150 million gallons a day) and in the Bundaberg area it is approximately 50,000 acre feet per annum (about 37 million gallons a day).

Schemes for artificial recharge of underground supplies have been implemented on both sides of the Burdekin River delta. Diversions from unregulated river flows of 61,000 acre feet per annum to the north side and of 40,200 acre feet per annum (when available) to the south side have been authorised.

In recent years there has been a marked increase, particularly in Queensland, New South Wales and Victoria, in investigation into the groundwater resources of river and coastal alluvium for irrigation and town water supplies.

### National and interstate aspects

In terms of the Commonwealth Constitution primary responsibility for control and conservation of water rests with the individual State Governments. The Commonwealth Government is responsible for matters relating to water in its Territories. However, because political boundaries sometimes intersect river valleys and underground water basins, co-operation between Governments has been necessary to develop resources in certain cases. Specific examples of Commonwealth-State and interstate co-operation and approach are given in the following paragraphs.

#### Australian Water Resources Council

The Australian Water Resources Council was established by joint action of the Commonwealth and State Governments in 1962. The council comprises Commonwealth and State Ministers primarily responsible for water resources, with the Commonwealth Minister for the Environment and Conservation as Chairman, and is serviced by a Standing Committee consisting mainly of the heads of Departments responsible to these Ministers, and by a number of technical committees, including one on water quality.

The primary objective of the Council is the provision of a comprehensive assessment on a continuing basis of Australia's water resources, and the extension of measurement and research to provide a sound basis for the planning of future development. In terms of its objectives and functions, the Council has dealt with a wide range of topics, making recommendations and stimulating action by appropriate bodies.

An accelerated water resources measure program involving many more new or improved gauging stations and groundwater investigations by Commonwealth and State Government authorities began in 1964-65. The Commonwealth Government approved extension of the program until 30 June 1973. In addition to its own commitments in the Territories, the Commonwealth is assisting the State Governments with their programs of water resources investigations. Since 1962-63, the total annual expenditure on this program by Australian Governments has increased more than three-fold.

The Commonwealth Government provided \$400,000 during the three years ended 30 June 1971 for the Water Research Fund administered by the Council which has approved eighteen projects in a new research program. This program, aimed at improving the efficiency of water management in Australia, complements research already undertaken by Commonwealth agencies, universities and other organisations. For the triennium to 1974 the Commonwealth Government allocated \$700,000.

Research results published or on open file, deal with a number of topics, for example:

Hydrology of small rural catchments in Australia, effects of land management on quantity and quality of available water, Australian desalination plants, streamflow measurement, evaporation studies, bore logging, and extraction of water in unconsolidated sediments.

The Council has given attention to the collation of available data on Australia's water resources. In 1965, a *Review of Australia's Water Resources (Stream Flow and Underground Resources)* 1963 was published, this being the first official assessment. A *Review of Australia's Water Resources (Monthly Rainfall and Evaporation)* by the Bureau of Meteorology was issued in 1969. Other council publications include a twice a year Newsletter, a Hydrological Series, a Technical Paper Series, an *Inventory of Water Resources Research in Australia* (published biannually), a Stream Gauging Information Catalogue (published five-yearly with annual supplements) and miscellaneous publications. Systematic publication of information is encouraged.

The Council continues to support Australian participation in the scientific program of the International Hydrological Decade (1965-74). An important contribution follows from the decision of the Council to establish ninety-three representative basins throughout Australia for detailed hydrological studies. The continuance and introduction of post-graduate study in hydrology is being encouraged at the universities. Under the auspices of the Council, a Groundwater School is held at about two-yearly intervals.

#### National Water Resources Development Program

In developing water resources, the Commonwealth Government's role in the past, while important, had been confined to assisting special projects or areas, e.g. the Snowy Mountains Scheme, participation in the River Murray Commission, and financial support for individual State projects such as the Ord River project. However, the National Water Resources Development Program, announced in November 1966, represents a very important move towards closer collaboration between State and Commonwealth Governments, and a more continuing and detailed involvement by the Commonwealth in the development of Australia's water resources.

Under the National Water Resources Development Program the Commonwealth has undertaken to provide grants to the States amounting to a total of about \$50,000,000 over five years for water conservation works aimed at reducing the hazards of droughts and expanding primary production. The grants under this program apply to the Emerald dam and irrigation project in Central Queensland (\$20,000,000); two Victorian schemes to reduce salinity levels in the Murray River (\$3,600,000); Taillem Bend-Keith pipeline, South Australia (\$6,000,000); Copeton dam on the Gwydir River, New South Wales (\$20,000,000); King River dam, Victoria (\$4,000,000); and the Cressy-Longford irrigation scheme, Tasmania (\$750,000). In October 1969 the Commonwealth undertook to provide a further sum of \$100,000,000 under this program. Further grants made are for major irrigation works in the Bundaberg region, Queensland (\$12,800,000), for flood mitigation works in New South Wales (\$9,000,000) and \$4,650,000 for assistance with construction of the Pike Creek Dam on the New South Wales-Queensland border rivers system. Commonwealth financial assistance to water resources measurements and investigations by the States is now included under this Program.

Proposals submitted by the States are examined by the Commonwealth to determine which are suitable, from a national point of view, for inclusion in the Program, and accordingly grants are announced from time to time.

### **Murray River scheme**

The Murray River and its tributaries form the largest river system in Australia. The catchment is approximately 408,000 square miles, or one-seventh of the area of the Australian continent, comprising five-sixths of New South Wales, over one-half of Victoria, one-sixth of Queensland and approximately one-fourteenth of South Australia. The Murray proper is 1,600 miles long. Its main tributaries are the Darling (1,700 miles), the Murrumbidgee (980 miles), and the Goulburn (350 miles). The average annual flow of each of the chief contributory streams is as follows: Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,820,000 acre feet; Darling River, 2,820,000 acre feet; Goulburn River (including Broken River), 2,580,000 acre feet; Murrumbidgee River, 2,050,000 acre feet; and Ovens River, 1,266,000 acre feet. Irrigated production in the Murray River Basin is mainly grapes for wine, dried fruits, fresh fruits, rice, vegetables, dairy produce, wool, and fat lambs.

*River Murray Waters Agreement.* For a brief summary of historical events leading up to the River Murray Agreement (1915) by the Governments of the Commonwealth, New South Wales, Victoria and South Australia see issues of the Year Book prior to No. 39. Under the Agreement construction works are carried out by the States (which are also responsible for maintenance) subject to the approval and direction of the River Murray Commission. The Agreement provides that the minimum quantity of water to be allowed to pass for supply to South Australia in each year shall be sufficient to maintain certain specified flows in the lower river varying from 47,000 acre feet a month in the winter months to 134,000 acre feet a month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. The flow at Albury is shared equally by New South Wales and Victoria, and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation. For a brief outline of the operation of the Agreement prior to 1949 see Year Book No. 40, page 1065, and earlier issues.

At a conference of Ministers held in 1949 to consider the diversion of the Snowy River it was decided that, by diversion of streams in the Snowy Mountains area, an average of approximately 440,000 acre feet per annum would be added to the Murray River (see Snowy Mountains Hydro-electric Scheme, page 855) and that increased storage should be provided in order to give additional regulation of the Murray River itself as well as to provide for regulation of the diverted waters. Hydro-electric potentialities would also affect the size of the storage.

The River Murray Commission investigated the position and subsequently recommended to the contracting Governments that the River Murray Waters Agreement be amended to provide for enlargement of the Hume Reservoir by 500,000 acre feet to approximately 2,500,000 acre feet. A conference of Ministers in 1954 agreed to the enlargement, and it was also agreed that the Commission should be given power to construct regulators and to carry out such other work on the Murray River between Tocumwal and Echuca as it considered necessary to reduce the losses from the regulated flow in that stretch of the river. The amended Agreement was ratified in the Parliaments of the Commonwealth and the three States and was proclaimed on 7 April 1955. In view of the proposed diversions by the Snowy Mountains Authority to and from the Murray River, and for other reasons, amendments to those sections of the River Murray Waters Agreement dealing with the distribution of the waters of the Murray were considered desirable. Following ministerial conferences, amendments were ratified by the four Parliaments concerned, and came into force on 6 November 1958.

Further amendment of the Agreement to provide for the construction of a storage of approximately 5,000,000 acre feet capacity at Chowilla in South Australia was ratified by legislation in the Commonwealth and State Parliaments and came into force on 30 April 1964. However, in view of the greatly



increased costs by the time the project came to tender in 1967 and other significant factors (including water quality in the Lower Murray) which had arisen in the interim, the River Murray Commission resolved that, pending further investigations, construction of Chowilla Dam should be deferred. Further investigations then followed, including a re-assessment of the likely yield from both Chowilla and alternative storages on the Upper Murray and Mitta Mitta Rivers. Following careful consideration of this re-assessment, the River Murray Commission in February 1969 agreed that a 3,000,000 acre feet storage at Dartmouth on the Mitta Mitta River provided the greatest overall benefits in terms of cost and yield and should be the next development of the resources of the River Murray. The question of sharing the benefits could not be resolved by the Commission and was therefore referred to the respective Governments. Subsequently, Ministers representing the four Governments concerned met in March 1969 and agreed on conditions for the construction of the Dartmouth Project and for the sharing of the increased system yield between Victoria, New South Wales and South Australia. Among other things, the meeting of Ministers agreed to continue the Menindee Lakes Agreement in perpetuity.

The Commonwealth Government has offered to assist the three States with financing the project by way of a loan to the extent of 50 per cent of each State's contribution. At the same time the Commonwealth itself will make its own quarter contribution of the cost of the project.

The Acts ratifying the amendments to the River Murray Waters Agreement were proclaimed by the four contracting Governments on 30 March 1972, and work commenced on the construction of Dartmouth Dam on 1 April 1972.

Inflows to the Murray system during the 1971-72 year were about average. The spring of 1971 was again marked by floods, the first and smallest occurring at the end of August, the second towards the end of September and the third and largest flood early in November. During these floods Yarrawonga Pool was operated to achieve the maximum degree of flood mitigation possible. With high uncontrolled flows in the Murray and its tributaries, close regulation of flow was not achieved until early 1972. The combination of sustained surplus river flows until December, ample storage resources and dry conditions in the irrigation areas resulted in record quantities of water being diverted by New South Wales and Victoria from the Murray system. Of the total flow of the River Murray and its tributaries in 1971-72, 3,401,000 acre feet was diverted and impounded by the State of New South Wales and 2,541,000 acre feet by Victoria, while 401,000 acre feet was diverted by South Australia. During the year 5,197,000 acre feet was passed to South Australia compared with 9,032,000 acre feet in the previous year. The total diversion for irrigation, town water and other purposes from the River Murray itself by New South Wales was 1,750,000 acre feet and by Victoria 1,523,000 acre feet.

*River Murray Works.* Dartmouth Dam when completed in 1977 will store 3,000,000 acre feet of water and will be the largest reservoir in the River Murray system. It will complement Hume Reservoir, situated just below the junction of the Murray and Mitta Mitta Rivers, which has a storage of 2,480,000 acre feet and forms a lake 50,000 acres in area.

The Yarrawonga Diversion Weir, which was completed in 1939, raised the river level so that water could be diverted by gravitation into main channels constructed on either side of the river. Between the Yarrawonga Weir and the Murray mouth, thirteen weirs and locks have been built. Two flood diversion weirs have been constructed on the Murrumbidgee—one between Hay and the Lachlan junction and the other below the Lachlan junction.

The Mulwala Canal, supplied from the Yarrawonga Weir, has an off-take capacity of 2,500 cubic feet a second, serving 1,800,000 acres of land in New South Wales. The Yarrawonga Channel, on the Victorian side, has an off-take capacity of 1,250 cubic feet a second, serving 300,000 acres. Not all of this area is irrigated.

Adjoining the river in New South Wales, and 35 miles from the Murray-Darling junction, Lake Victoria storage, with a surface area of 27,670 acres, was completed in 1928. The water released from Lake Victoria is used by the South Australian settlements. The inlet channel to Lake Victoria was enlarged in 1957 to permit greater diversion of periodical flood flows of short duration.

Five barrages across channels near the Murray River mouth connecting Lake Alexandrina with the sea were completed in 1940 to prevent ingress of salt water to Lakes Alexandrina and Albert and to the lower river, thereby increasing the productivity of adjacent lands. The structures maintain a sufficiently high level for 50 miles up river to permit watering by gravitation of a considerable area of reclaimed river flats. The total distance across the barrages and intervening islands is 15 miles.

In addition to the works carried out under the auspices of the Commission, the separate States have constructed thousands of miles of distribution channels and have provided a number of storages on the tributaries, thereby contributing materially to the large amount of irrigation development in the Murray Basin. The main storages are: New South Wales—Menindee Lakes Storage (Darling), Blowering (Tumut), Burrinjuck (Murrumbidgee), Copeton (Gwydir), Keepit (Namoi), Burrendong

(Macquarie) and Wyangala (Lachlan); Victoria—Eildon (Goulburn), Waranga (Goulburn), Mokoan (Broken), Eppalock (Campaspe) and Cairn Curran (Loddon). Details of these, and other State works on Murray tributaries will be found in the sections dealing with State systems.

### New South Wales-Queensland Border Rivers Agreement

The catchments for the border streams of New South Wales and Queensland (2,000 square miles) extend to the granite areas in the vicinity of Tenterfield (New South Wales) and Stanthorpe (Queensland), and elevation rises to 3,000 feet. Average rainfall is 30 inches. The catchments and the areas suitable for irrigation are approximately equal in each State. Climatic conditions are such that from April to October it is necessary to supplement rainfall by irrigation to stabilise and increase production. The capacity of the area to grow lucerne and tobacco under irrigation has already been demonstrated. Other possible development of the area includes irrigation of cotton, root crops, cereals, and citrus fruit, and expansion of the fat stock industry.

The New South Wales-Queensland Border Rivers Agreement came into effect on 1 July 1947. The Agreement provided for the construction of certain works on those sections of the Severn, Dumaresq, MacIntyre, and Barwon Rivers, which constitute part of the boundary between New South Wales and Queensland for the furtherance of water conservation, water supply and irrigation in those States.

The works to be constructed comprise a dam on the Dumaresq River at a site to be selected by the Border Rivers Commission to give a storage basin with a capacity as large as is reasonably practicable, and not less than six nor more than twelve weirs as may be found necessary to meet the requirements of irrigation along the rivers. Provision was also made for the construction of not more than four regulators in the effluents from the Border Rivers and for the taking over of the existing weirs on the MacIntyre and Barwon Rivers at Goondiwindi and Mungindi respectively. The cost of these works and of administration are to be borne by the States in equal shares. The Agreement further provided that the water discharge from the Dumaresq storage, whether by regulated or unregulated flow, shall be available to the two States in equal shares.

After unfavourable foundation conditions were disclosed at several dam sites on the Dumaresq River, investigations were extended to tributary streams, and superficially suitable sites located on Pike Creek and the Mole River. A geophysical survey was made at each of these sites and preliminary comparative estimates were prepared to determine the relative economy of providing one large storage at Mingoola or two smaller storages on the tributaries. Following exploratory drilling of the tributary sites, a report dealing with alternative storage proposals and possible amendments to the existing Agreement was submitted to the participating States. Consequent upon these investigations an Amending Agreement was executed between the States of New South Wales and Queensland in November 1968, which included, *inter alia* provision for the construction of storages on Pike Creek (Queensland) and the Mole River (New South Wales). The new agreement also provided for investigation and construction of works for the improvement of flow and of the distribution of flow in streams which intersect the New South Wales-Queensland border west of Mungindi.

Works completed under the original agreement include Bonshaw, Cunningham and Glenarborn Weirs on the Dumaresq River, a weir and regulator on the Barwon River at the off-take of the Boomi River. Until a dam has been constructed it is unlikely that any other weirs will be required.

*Dam on Pike Creek.* In December 1970 following a request by the two States, the Commonwealth agreed to contribute one third of the cost of the dam on Pike Creek up to a maximum of \$4.65 million, dependent upon a check by the Snowy Mountains Engineering Corporation of the cost estimate. Pending the outcome of the check the two States authorised expenditure to enable the preparation of plans and specifications for the dam to continue. In May 1972 the Commonwealth advised the check of the estimates had been completed. The two States subsequently approved that the dam be constructed to provide a gross storage capacity of 212,000 acre feet, at an estimated cost of \$14 million and the time of its commencement be 1 July 1972. Preliminary works are now in hand and the major contract for construction of the dam is expected to be let late in 1973.

*Improvement of distribution of flow—Rivers crossing the border.* During 1971–72 the two States considered proposals for the better distribution of flows in the Balonne-Culgoa River System. The proposals provide for the construction of four regulating structures one in each stream immediately downstream of the four main bifurcations, namely, the Culgoa/Balonne Minor, the Balonne Minor/Donnegri Creek, the Ballandool/Bokhara and the Bokhara/Birrie bifurcations. The works, estimated to cost \$152,000, to be met equally by the two States, were commenced in November 1972 and scheduled for completion late in 1973.

### Snowy Mountains Hydro-electric Scheme

Following a comprehensive investigation into both the water and power potential of the Snowy River waters by a Technical Committee representative of the Commonwealth and the States of New



South Wales and Victoria in 1947 and 1948, and the submission by the Committee of reports in 1948 and 1949, the Commonwealth Parliament passed the *Snowy Mountains Hydro-electric Power Act* 1949 setting up an Authority to implement the proposals agreed upon.

The basis of the proposals was to impound the Snowy River waters at high elevations and, by diverting them into tunnels passing under the Alps, to use their potential power for the generation of electricity and then to discharge them into the Murray and Murrumbidgee River systems for use in the irrigation areas.

The scheme involves two main diversions, that of the Eucumbene, a tributary of the Snowy, to the Upper Tumut River, and that of the main stream of the Snowy River at Island Bend and Jindabyne to the Swampy Plain River. In addition, works required to make use of the waters of the Upper Murrumbidgee, the Upper Tumut, the Upper Tooma and the Geehi Rivers for power generation also provide additional regulation of these streams, and this makes more water available for irrigation. Details of the two trans-mountain diversions and the associated power works together with details of progress and construction are given in Chapter 27, Electric Power Generation and Distribution.

The average total gain by diversion and regulation now that all storage works are completed is assessed at 1,120,000 acre feet per annum to the Murrumbidgee and 800,000 acre feet per annum to the Murray.

### International aspects

Australia maintains contact with international developments in water conservation and irrigation through its membership of the International Commission on Irrigation and Drainage since 1952. This Commission was set up in India in 1950 in order that the technical experience of all countries might be pooled for the benefit of all, and to promote the development and application of the science and technique of irrigation and drainage in the engineering, economic and social aspects. The Commission is constituted of National Committees of participating countries, and sixty-one countries, including Australia, have so far been admitted to membership.

The Central Office of the International Commission on Irrigation and Drainage is situated in New Delhi, India. Congresses, which are held every three years, have taken place in India, Algeria, the United States of America, Spain, Japan, in that order and again in India in 1966, in Mexico in April 1969, and Bulgaria in 1972.

An Australian National Committee was established following a meeting of representatives of Australian authorities held in Melbourne in 1953. At that meeting it was decided, *inter alia*, 'that a National Committee should be formed and that the National Committee would consist of representatives of Government Departments, Statutory Authorities, firms, and individuals actively interested in irrigation and drainage'. The Committee meets annually.

### STATES AND TERRITORIES

The foregoing text deals with water conservation and irrigation in Australia generally and with international, national and interstate aspects. The following survey covers the local pattern of water resources and the steps taken by the State Governments to bring about their development. In the various States, water policies tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria almost every form of water scheme is in operation, in New South Wales major emphasis at present is on irrigation and stock development in the dry areas along the Murray and Murrumbidgee Rivers, though a substantial scheme of intensive irrigation is being conducted in the Murrumbidgee Irrigation Areas. In Queensland, up to the present, the predominant emphasis has fallen on water (mainly underground sources) for stock, and the development of small irrigation schemes in sub-humid and humid areas, especially to stabilise sugar production. Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest relates almost exclusively to hydro-electric generation. The Northern Territory is concerned primarily with stock supplies and the safeguarding of long stock routes.

### New South Wales

On page 1110 of Year Book No. 37 information is given on the pattern of rainfall and the history of irrigation in New South Wales. (See also the chapter Physical Geography and Climate of this issue.)



### Administration

The Water Conservation and Irrigation Commission of New South Wales consists of three members appointed by the Governor. The operations of the Commission cover water conservation, control of irrigation areas, the establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, assistance under the provisions of the farm water supplies scheme, and river improvement works.

Under the Water Act, 1912–1955 the right to the use and flow, and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Commission for the benefit of the Crown. A system of licences operates for the protection of private works of water conservation, irrigation, water supply, drainage and prevention of inundation.

For particulars of the New South Wales–Queensland Border Rivers Agreement ratified by Acts of both States in 1947, *see* page 855 of this chapter.

### Schemes summarised

The bulk of irrigated land is along the Murray and its tributary the Murrumbidgee. Smaller areas are served by the Wyangala Dam, Lake Cargelligo and Lake Brewster on the Lachlan (a tributary of the Murrumbidgee), by Glenbawn Dam on the Hunter River, by Keepit Dam on the Namoi River, by Burrendong Dam on the Macquarie River, and by the Menindee Lakes Storage on the Darling River. None of the other rivers is regulated by large head storages, though weirs and dams have been provided for town supplies, etc. in many places. Copeton Dam on the Gwydir River is in the course of construction. In addition, substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including irrigation areas, irrigation districts, water trust districts, flood control and irrigation districts, and river improvement districts. There are nine irrigation areas, although two of these, Yanco and Mirrool, are generally described under the one heading, namely, the Murrumbidgee Irrigation Areas. The Areas are: The Murrumbidgee Irrigation Areas, consisting of 451,263 acres served with water through a channel system stemming from the river at Berembded Weir; the Coomealla Irrigation Area of 34,626 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,388 acres, supplied from the Murray by pumping; the Hay Irrigation Area of 6,850 acres, supplied with water pumped from the Murrumbidgee; the Tullakool Irrigation Area of 18,006 acres, supplied from the Edward River by diversion at Stevens Weir; the Buronga (8,739 acres) and Mallee Cliffs (1,900 acres) Irrigation Areas, served by pumping from the Murray; and the Coleambally Irrigation Area (234,637 acres), served by diversion from the Murrumbidgee River. All these Areas are administered by the Commission.

The capacities of the main storages for irrigation in New South Wales (in acre feet) are:

*Darling*—Menindee Lakes Storages (1,468,700);

*Murray*—Half share of Hume Reservoir, weirs and locks to Wentworth (1,351,420); Stevens Weir, Edward River (7,165);

*Tumut* (tributary of Murrumbidgee)—Blowering Dam (1,322,400);

*Macquarie*—Burrendong Dam (964,200 irrigation storage; 396,800 flood mitigation storage);

*Murrumbidgee*—Burrinjuck Dam (837,000); Redbank Weir (7,360); Maude Weir (6,740);

*Namoi*—Keepit Dam (345,300);

*Lachlan*—Wyangala Dam (987,000); Lake Brewster (123,900); Lake Cargelligo (29,430);

*Hunter*—Glenbawn Dam (185,300 acre feet irrigation storage; 107,900 acre feet flood mitigation storage);

*Belubula* (tributary of Lachlan River)—Carcoar Dam (30,000); and

*Snowy Mountains Hydro-electric Scheme*—Lake Eucumbene (3,890,000); Jindabyne Reservoir (558,000); Tantangara Dam (206,000).

The total length of supply channels, drains, escape channels and pipe lines constructed by the Water Conservation and Irrigation Commission in New South Wales is 5,227 miles. This comprises 3,564 miles of supply channels (including main canals), 1,594 miles of drains and escape channels, and 69 miles of pipe lines.

**Irrigated culture**

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1971-72 season.

**AREA OF LAND UNDER IRRIGATED CULTURE: NEW SOUTH WALES, 1971-72**  
(Acres)

	<i>Method of irrigation</i>					<i>Total Area</i>
	<i>Spray</i>	<i>Furrow</i>	<i>Flood</i>	<i>Trickle</i>	<i>Multiple Methods</i>	
<b>Crops—</b>						
Cereals . . .	35,944	50,430	486,882	..	2,929	576,185
Cotton . . .	..	57,986	14,237	..	200	72,423
Fruit . . .	17,361	16,992	1,851	946	474	37,624
Linseed . . .	170	320	1,510	..	53	2,053
Safflower . . .	51	1,078	..	..	1,393	2,522
Sunflower . . .	1,467	6,497	21,926	..	330	30,220
Tobacco . . .	2,795	226	74	..	51	3,146
Vegetables . . .	27,673	7,879	1,567	52	222	37,393
Vineyards . . .	2,368	17,823	1,253	1,394	371	23,209
Other crops (a) . .	6,211	7,399	18,915	43	877	33,445
<b>Total crops . . .</b>	<b>94,040</b>	<b>166,630</b>	<b>548,215</b>	<b>2,435</b>	<b>6,900</b>	<b>818,220</b>
Lucerne . . .	85,935	916	80,981	..	506	168,338
Pastures . . .	122,509	8,175	817,373	..	4,506	952,563

(a) Includes fodder crops.

**Irrigation areas**

*Murrumbidgee.* This area, which consists of Yanco and Mirrool Irrigation Area, together with adjacent lands supplied under agreement, received 396,340 acre feet, nearly 12 per cent of the total water (3,297,956 acre feet) used within the State for stock, domestic and irrigation purposes. The area is served by the Burrinjuck Dam on the Murrumbidgee River and Blowering Dam on the Tumut River, which joins the Murrumbidgee River near Gundagai. The catchment of the Burrinjuck Dam is about 5,000 square miles and water storage in Blowering Dam is from the natural flow of the Tumut River and water released into that river from the Snowy-Tumut Development Section of the Snowy Mountains Hydro-electric Scheme. This includes water from the Eucumbene, Upper Murrumbidgee, Tooma and Upper Tumut Rivers. The dams also provide town supplies for Gundagai, Wagga, Narrandera, Hay, Balranald, and for towns served by the South-West Tablelands scheme.

Domestic and stock water and water for irrigation are supplied to the Irrigation Districts of Tabbita, Benerembah and Wah Wah, and the Flood Control and Irrigation District of Lowbidgee. Flood flows are relied on to serve the Lowbidgee district, and water is not released from the dams for that purpose. For other areas and districts, however, water is stored during the winter, fed by melting snows and spring freshets, and is released during the September-May irrigation season. To supply the Yanco and Mirrool Areas, water is diverted by Berembeld Weir, into the main canal which has an off-take capacity of 1,600 cubic feet a second. The main canal has been completed to beyond Griffith, a distance of approximately 96 miles. These areas are served by approximately 797 miles of supply channels and pipes and 880 miles of drainage channels. In addition, approximately 444 miles of supply channel run through the Tabbita, Benerembah and Wah Wah Districts which are adjacent to the Areas.

The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas only, and has no jurisdiction over land transactions in the adjacent irrigation districts, although it is responsible for the operation and maintenance of the water supply in these areas. Other local government services, including electricity and town water supply, are provided by Councils. Land is disposed of by the Commission by purchase or under perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30 June 1972 was 408,226 acres including 29,348 acres held for short lease grazing, agriculture, etc.

The land on which the Murrumbidgee Irrigation Areas and associated districts are situated originally comprised large sheep stations and was sparsely populated, but at 30 June 1972 its population was approximately 33,825, that of Leeton Shire being 11,500 and that of Wade Shire 21,500. The principal products of the Murrumbidgee Irrigation Areas are wool, livestock for slaughtering, rice, citrus fruits, peaches and nectarines, grapes, tomatoes, peas, beans, and root vegetables. Rice growing was initiated on the Areas in 1924 and has since become the most important crop. In a normal season, the water supplied for rice represents about half the total delivered to the Areas.

*Other Irrigation Areas.* The Coomealla, Tullakool, Buronga, Mallee Cliffs, Hay, Curlwaa, and Coleambally Irrigation Areas follow the same administrative pattern as the Murrumbidgee Areas—that is, land transactions are administered by the Water Conservation and Irrigation Commission which is responsible also for the operation and maintenance of works to supply water.

### Irrigation districts

These districts are set up under the Water Act, 1912–1955 for (a) domestic and stock water supply and (b) irrigation. The essential difference between an 'Area' and a 'District' is that in the case of the former, all the land to be included in the area is acquired by the Crown and then subdivided into such number of separate holdings as may be determined. Within the District, however, existing ownership of land is not disturbed other than to acquire land required for water distribution works.

Since the completion of the Hume Reservoir, several such districts have been established along the Murray to utilise the New South Wales share of the storage. Water is not available for the whole of the 5,000,000 acres adjacent to the Murray in New South Wales, and therefore the schemes are based on 'extensive' irrigation, that is, water rights are allotted to holdings on the basis that only a portion of each holding (one acre in three, five or ten, according to the district, etc.) will be irrigated, but additional water, when available, may be obtained by landholders. 'Water right' means right to such a quantity annually of water, 12 inches deep, as will cover an area of one acre.

Water to serve Berriquin, Deniboota and Denimein Districts is diverted from the River Murray at Yarrowonga into the Mulwala Canal. Water for the Wakool Irrigation District and the Tullakool Irrigation Area is diverted from the Edward River at Stevens Weir, and a supplementary supply is also obtainable from Mulwala Canal. The total length of completed canals and channels in Berriquin District is 1,045 miles, comprising Mulwala canal 75 miles, Berrigan channel 22 miles, subsidiary channels 824 miles, escape channels 114 miles, and cross drainage channels 10 miles. Off-take capacity of the Mulwala canal is 5,000 acre feet a day. Wakool, with 430 miles of channels, contains 322 holdings, and the area developed by irrigation includes about one acre in six of the total area. Sheep raising and rice growing are the main industries. Considerable subdivision has occurred within the Berriquin District, and the proportion of the total area developed for irrigation is higher than in the case of Wakool. Sheep (including fat lambs), dairying, wheat, and rice growing are the main industries.

### Water Trust Districts, Irrigation Trusts and Flood Control and Irrigation Districts

The Water Act, 1912–1966 provides for the constitution of Trust Districts for domestic and stock water and irrigation, and empowers the Commission to construct, acquire or utilise necessary works. When the works are completed, they are handed over to trustees to administer. The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits. The following are the water trusts, other than irrigation, as at present constituted (the area in acres of each district being shown in parenthesis): *Murray River*—Little Murrumbidgee Creek (157,440), Bullatale Creek (68,320), Poon Boon (34,300), Minnie Bend Flood Prevention (2,190); *Murrumbidgee River*—Yanco, Colombo and Billabong Creeks (1,007,780); *Lachlan River*—Marrowie Creek (292,640), Torrigan, Muggabah and Merrimajack Creeks (170,240); *Micabil Weir* (11,500), Condobolin West Weir (4,480); *Miscellaneous*—Great Anabranch of Darling River (959,184), Nidgerie Weir (46,880) and Algdudgerie Creek (9,670)—making in all a total area of 2,764,714 acres. Eleven of these trusts have been formed for the provision of water for domestic and stock purposes and one for flood prevention.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way. There are seven of these trusts.

The Lowbidgee Provisional Flood Control and Irrigation District, the first of its kind, was constituted in 1945. Its purpose is to provide flood irrigation for pasture lands on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. Another district, Medgun, near Moree in the north-west, is also in operation.



### River, lake and farm water supplies

During recent years the number of licences and permits issued to individuals to draw water from rivers and lakes for irrigation have increased substantially, especially along the coastal streams in sub-humid districts where the value of supplementary irrigation is becoming more recognised as a means of stabilising production in dry months. There has also been a considerable increase along the Murrumbidgee, Lachlan, Namoi, and Macquarie Rivers.

Under the Farm Water Supplies Act, 1946, technical advice and assistance, and also financial assistance, are made available to help individual farmers and groups of farmers to provide and improve water supplies for domestic, stock and irrigation purposes by means of wells, bores, excavated tanks, weirs or dams, and flood and spray irrigation systems.

### Underground water

For information on underground water resources in New South Wales see Year Book No. 55 and earlier issues.

### Future program

The program of development in hand includes the provision of additional dams and storages, weirs, and flood mitigation and river protection works in various parts of the State. Work is continuing at Copeton Dam site on the Gwydir River. Legislation has been passed authorising the construction of Windamere Dam on the Cudgegong River, a dam on the Brogo River and existing legislation authorises the construction of a flood control and irrigation dam at Warkworth in the Hunter Valley. The Hunter River development, of which Glenbawn Dam is an integral part, incorporates an exceptionally fertile coastal valley, forming the hinterland to Newcastle, where the annual rainfall is not heavy and variations from month to month are considerable. The strengthening and enlargement of Wyangala Dam, on the Lachlan River, has been completed and storage capacity has been increased to 987,139 acre feet following installation of radial gates in the spillway. Within the new Coleambally Irrigation Area further development of farms has been carried out and water is being supplied by the Coleambally Canal which off-takes from the Murrumbidgee River at Gogeldrie Weir. At 30 June 1972, 313 large area farms and 22 horticultural farms were occupied.

## Victoria

Particulars of the rainfall pattern of Victoria were given on page 1117 of Year Book No. 37. (See also the chapter Physical Geography and Climate of this issue.)

### Administration

Victorian Governments have been active in the development of country water supplies since the 1860's when major works to supply the Bendigo goldfields were undertaken. Local trusts to construct and operate waterworks under Government supervision were provided for in the *Water Conservation Act* 1881. Development under the trust system was greatly stimulated by the *Irrigation Act* 1886, which provided for the construction of national headworks by the State, and vested in the Crown the right to the use and control of all surface waters. By 1900 there were 33 irrigation trusts and 18 other rural water supply trusts, but the system of local control was then breaking down under financial difficulties.

The *Water Act* 1905 established the State Rivers and Water Supply Commission to take over the Irrigation Trust districts (except the still-existing First Mildura Irrigation Trust) and to exercise the State's functions in the further control and development of surface waters outside the metropolis. The Commission now supervises all private diversions from streams and directly administers irrigation districts covering 2,259,280 acres, rural waterworks and urban districts covering 12,120,000 acres, flood protection districts covering 148,850 acres, and urban water supplies serving 312,600 people. It also supervises the activities of local urban water supply authorities supplying 798,700 people in 274 towns, as well as 111 local sewerage authorities and 31 river improvement and drainage authorities.

### Works summarised

Since the State Rivers and Water Supply Commission began its operations in 1906 the capacity of storages under its control has been increased from 172,000 acre feet to 5,015,920 acre feet. In addition, Victoria has in effect a half share in River Murray Commission storages totalling 2,703,150 acre feet, bringing total capacity available to Victoria at 30 June 1972, to 6,367,490 acre feet. Most

of the water used from these storages is for irrigation. The area irrigated in 1971-72 totalled 1,472,591 acres (compared with 105,000 acres in 1906). Irrigation deliveries in 1971-72 totalled 2,566,832 acre feet. The value of irrigation production in 1970-71 was estimated at \$194,600,000. Of the total irrigation production about one-quarter was from lands irrigated by 'private diverters', i.e. irrigators who are authorised to take water from streams, lakes, etc., but who do not come within the boundaries of an irrigation district.

### Storages

Capacities of principal storages (in acre feet) and system totals at 30 June 1972 were as follows:

*Goulburn System*—Eildon, 2,750,000; Waranga, 333,400; total, 3,133,150;

*Murray System*—half share of Murray storages, 1,351,570; total, 1,392,430;

*Broken River System*—Nillahcootie, 32,260; Mokoan, 300,000; total, 332,260;

*Ovens System*—Lake Buffalo, 19,500; Lake William Hovell, 10,000; total, 29,500;

*Loddon System*—Cairn Curran, 120,600; Tullaroop, 60,000; Laanecoorie, 6,300; total, 186,900;

*Campaspe-Coliban System*—Eppalock, 252,860; Coliban storages, 64,930; total, 317,790;

*Wimmera-Mallee Systems*—Rocklands, 272,000; Toolondo, 86,000; Bellfield, 63,680; total, 627,890;

*Maffra-Sale System*—Glenmaggie, 154,300; total, 154,340;

*Werribee-Bacchus Marsh*—total, 48,300;

*Mornington Peninsula*—total, 47,640.

### Irrigated culture

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1971-72 season.

AREA OF LAND UNDER IRRIGATED CULTURE: VICTORIA, 1971-72  
(Acres)

	Method of irrigation					Total area
	Spray	Furrow	Flood	Trickle	Multiple methods	
Crops—						
Cereals . . .	2,221	840	35,737	21	24	38,843
Fruit . . .	14,610	10,620	17,979	3,964	1,862	49,035
Vegetables . . .	33,313	6,823	2,361	54	214	42,765
Vineyards . . .	5,829	37,464	2,642	204	196	46,335
Other crops(a) . . .	12,518	441	8,604	27	603	22,193
Total crops . . .	68,491	56,188	67,323	4,270	2,899	199,171
Lucerne . . .	14,979	66	42,345	20	291	57,701
Pastures . . .	51,638	25	1,175,989	14	8,390	1,236,076

(a) Includes fodder crops.

### Irrigation systems

*Goulburn-Campaspe-Loddon.* The principal storage for Goulburn waters is Lake Eildon, which was completed in 1956, submerging the original 306,000 acre feet Eildon storage completed in 1927. For the distribution of additional supplies available from Eildon and from other new storages on the Loddon and Campaspe rivers it has been necessary to undertake major enlargements in the distribution system by a long-term program of channel works which is still in progress. Deliveries during 1971-72 amounted to 1,089,495 acre feet, compared with 395,000 acre feet in 1954-55. Goulburn River water is diverted to the irrigation areas by gravitation from the pool formed by the Goulburn Weir, near Nagambie, completed in 1890 as a State work. The East Goulburn main channel of 1,000 cusecs capacity supplies the areas around Shepparton. Two 1,500 cusec channels to the west convey water to the off-river Waranga Reservoir and supply part of the Rodney area through

off-takes on the way. From Waranga Reservoir there are two main outlets, one supplying the western part of the Rodney area and the other, of 1,200 cusecs capacity, supplying the Waranga Western Main Channel, which runs 230 channel miles west across the Campaspe and Loddon Valleys to beyond Birchip.

Flows in the Waranga Western Main Channel are augmented by the injection of Campaspe water through a pumping station of 200 cusecs capacity near Rochester. Supply to the Tragowel and Boort areas is augmented by gravitational diversion of Loddon water.

The gross area of holdings in the Goulburn-Campaspe-Loddon systems is 1,333,888 acres. The main products are dairy produce, fruit, wool, and fat lambs. Annual production of deciduous canning fruits in the eastern part of the system is about two-thirds of Australia's total.

*Murray River system.* Water is diverted from the Murray by gravity at the Yarrawonga Weir for the Murray Valley Irrigation Area and at the Torrumbarry Weir for the Torrumbarry irrigation system which extends to Swan Hill. Holdings in the Murray Valley area total 301,423 acres, devoted mainly to dairying, fat lambs and canning fruit. Holdings in the Torrumbarry system total 396,825 acres, devoted mainly to dairying and the production of fat lambs, with a concentration of vineyards, orchards and market gardens around Swan Hill.

Downstream from Swan Hill there are 5 districts supplied by pumping: the district of the First Mildura Irrigation Trust and the 4 Commission districts of Nyah, Robinvale, Red Cliffs and Merbein. These districts together serve 80,577 acres, producing mainly dried vine fruits, with some citrus fruits and table and wine grapes.

*Southern systems.* The Maffra-Sale-Central Gippsland district, covering 130,460 acres around Maffra and Sale, is supplied from the Macalister River, regulated by Lake Glenmaggie, and from the unregulated flow of the Thomson River. Dairy Farming is the principal activity. The Bacchus Marsh and Werribee District, supplied from storages in the Werribee River only 20 miles west of Melbourne, cover 16,107 acres intensively developed for dairying and vegetables.

#### **Wimmera-Mallee domestic and stock supply system**

Storages in the Grampians in south-west Victoria ensure farm water supplies over an area of 11,000 square miles extending northward through riverless pastoral and cereal lands to the Murray. Farm dams throughout this region, which covers one-eighth of the total area of the State, are filled once each year, in the winter-spring season, through the medium of 6,600 miles of Commission channels and about 4,000 miles of private channels. Without this supply, occupation of the region would be extremely hazardous. Storage capacity has now been increased from 564,210 acre feet to 627,890 acre feet by construction of Lake Bellfield. Fifty towns, with a population of 46,000, receive their supply from the same system. Near Horsham and Murtoa, close to headworks in the south, a supply is maintained for the irrigation of an area of 7,500 acres, mainly for dairying.

#### **Drainage, flood protection and river improvement**

The largest work in this category undertaken by the State Rivers and Water Supply Commission is the Koo-wee-rup-Cardinia flood protection district embracing 89,245 acres of a continuous depression along the seaboard of Westernport. Once useless, indeed a hindrance to communication, this area now yields primary products worth several million dollars each year.

By the *River Improvement Act* 1948, the formation of local river improvement and drainage trusts under the supervision of the Commission has been greatly facilitated and since 1950, 31 such trusts have been formed (including the Dandenong Valley Authority). The importance of river improvement work is expected to continue to grow.

The Dandenong Valley Authority was created in 1963 by special legislation, with jurisdiction over the whole catchment of the Dandenong Creek (300 square miles) for purposes of arterial drainage, river improvement and flood protection. In June 1966 the Authority took over the Commission's Carrum Drainage District.

#### **Finance**

The net capital liability of the Commission at 30 June 1972 for works under its direct control was \$343.1 million. Eighty-six per cent of the cost of capital and interest repayments was borne by the State. Total expenditure on irrigation was \$185.6 million; \$32.7 million on rural, domestic and stock supplies; \$58.5 million on urban supplies and \$2.6 million on flood protection. A further \$25.9 million (relating mainly to irrigation) was expended on headworks but has not yet been allocated to the above. The remaining \$37.7 million was for expenditure on storages for private diversion and to supplement supplies to local authorities, and for items such as loan flotation expenses, miscellaneous surveys and investigations, and buildings, plant and stores.



### Future program

In July 1963 the Government announced plans for a long-term storage program for irrigation purposes to cost a total of \$75 million between 1963-64 and 1973-74. This included the projected Chowilla Reservoir, which will not now be constructed, and the Lake Buffalo project, which has been deferred following the decision to construct Dartmouth.

Since the long-term storage program came into operation, storages have been completed for the Wimmera-Mallee System (Lake Bellfield, near Horsham); the Mornington Peninsula System (Devilbend Reservoir and Tarago Reservoir); private diversers near Benalla (Lake Nillahcootie); on the Buffalo River (first stage of Lake Buffalo); the Goulburn-Murray System (Lake Mokoan near Benalla, Corop Lakes); and irrigators in the King River Valley (Lake William Hovell on the King River).

Construction of an access road to the Dartmouth Dam site and preparation of the site area commenced during the 1972 winter. It is planned that the project, including a hydro-electric power station with associated pondage area, will be completed late in 1978.

Construction of the Rosslynne Reservoir (20,000 acre feet), near Gisborne, is well advanced with May 1973 set as the target date for the commencement of filling. The reservoir will provide domestic water supplies for the Sunbury area and will regulate down-river releases to existing users.

Field investigations into the reduction of salt in the Lake Victoria and Chowilla areas, by means of control works proposed for the Murray River, are being undertaken jointly with the States of New South Wales and South Australia.

Details of a storage on the Mitta Mitta River at Dartmouth in North-Eastern Victoria appear on page 849.

## Queensland

Particulars of the rainfall pattern of Queensland are given in Year Book No. 37, page 1122. (*See also* the chapter Physical Geography and Climate of this issue.)

### Introduction

The important primary industries of Queensland are subject to relatively frequent and serious losses by drought and also to extensive flooding. There is therefore a definite and widespread need for the provision of works for water conservation for irrigation, stock watering and for flood mitigation.

The average annual flow of all streams in Queensland of 108 million acre feet, equivalent to 39.2 per cent of that for all Australian streams, gives ample scope for such works.

### Water resources investigation

The Commissioner of Irrigation and Water Supply is required, under the *Land and Water Resources Development Acts* 1943 to 1946, to (a) prepare a complete description of the natural water resources of the State, both surface and underground, (b) undertake and carry out a survey of such resources, and (c) keep a record of all such natural water resources, surface and underground. For this purpose the Commission has installed and operates 524 stream gauging stations (448 of them being equipped with automatic water level recorders) and collects rainfall data from 187 stations in addition to Commonwealth Bureau of Meteorology stations.

### Licensing and control

As required under the Water Act, rights to underground and surface water are allocated and use controlled by a system of licensing of—(a) all artesian bores in the State; (b) all sub-artesian bores in areas proclaimed by the Governor in Council; the main purpose of proclaiming areas is to ensure the equitable distribution of available supplies and to obtain information on the quantity, quality, extent and use of those supplies. (c) all conservation and use (other than for stock and domestic supplies) of flow in watercourses.

The Commission is required to control use to share supplies as equitably as possible in periods of shortage of supply. At 30th June, 1972, 13,412 waterworks licences were in existence, 10,142 being for pumps and 2,596 for dams and weirs and 674 for other works. Areas of sub-artesian water supply proclaimed in which all bores and wells require a license total 544,400 square miles. A total of 26,757 bores (artesian and sub-artesian in proclaimed areas) were registered at 30th June, 1972.

### Development of water resources

The Commissioner of Irrigation and Water Supply is required to prepare a co-ordinated program of work for the conservation, utilisation and distribution of water resources, and to make recommendations to the Government regarding the carrying out of works in this program.

The Commissioner is principally responsible for water conservation and supply works for rural purposes, including irrigation, stock and domestic supply. However, in planning such works, particularly storages, economies to all users can accrue by providing where possible for dual or multi-purpose use of works for irrigation, rural, urban and industrial including power generation and mining purposes. As a result of this approach, 14 cities and towns now draw supplies from Commission storages or by diversion from regulated streams, four storages provide supply for power generation at three thermal stations (Swanbank, Calcap and Collinsville) and one hydro-electric station (Barron Falls), supply for mining operations is drawn from three other storages, and stock water supplies are or will be provided from two Commission and two private pipeline systems serving power stations or mining operations. Urgent water requirements of the expanding mining activities in Central, North and North West Queensland have brought out the need to further ensure the orderly and efficient development of the limited water resources in these areas, to provide for immediate and future needs for both urban, mineral and rural purposes.

### Water conservation

At 30 June 1972, the Irrigation and Water Supply Commission controlled and operated 11 dams (2 approaching completion) and 50 weirs with a total available storage capacity of 2,135,027 acre feet. Two dams (Tinaroo Falls and Eungella) are located in North Queensland; two (Fairbairn and Callide) in Central Queensland; the other seven (Moogerah, Leslie, Borumba, Coolmunda, Wuruma, Atkinson and Beardmore) in South Queensland. Of the weirs 28 are in South, 11 in Central and 11 in North Queensland. Weir capacity ranges from 14,000 to less than 50 acre feet; 13 of them having a capacity each of over 1,000 acre feet. Completion of Beardmore, Maroon and Monduran Dams, Kolan Barrage and Chinchilla Weir now under construction will provide additional storage of 585,000 acre feet.

### Irrigated culture and sources of supply

The total area under agriculture in Queensland in 1971-72 was 5.0 million acres. Of this area some 453,562 acres were irrigated. In 1971-72 crops or pastures were irrigated on 9,907 holdings or 22.9 per cent of all rural holdings in the State. The area of crops (excluding lucerne and sown and native pastures) irrigated was 348,059 acres, or 6.8 per cent of the total area under crop. In addition there were 47,864 acres of lucerne irrigated and 57,639 acres of other sown and native pastures. The average area irrigated per holding using irrigation was 46 acres.

Unlike other States, the greater part of the area irrigated is by individual private pumping plants drawing supply from streams or underground sources, spread widely throughout the State, rather than in constituted irrigation areas where supply is provided by channel systems delivering water to farms.

The following table shows details of the sources of supply for the area of land under irrigated culture during 1971-72.

AREA OF LAND UNDER IRRIGATED CULTURE AND SOURCES OF SUPPLY: QUEENSLAND, 1971-72

Source of supply	Area irrigated		Percentage of total area irrigated	
	acres	acres	%	%
Underground supplies—				
Naturally replenished . . . }	..	260,464	..	57.4
Artificially replenished . . . }				
Surface supplies—				
Irrigation areas . . . }	53,603		11.8	
Regulated streams . . . }	107,684		23.7	
Unregulated streams . . . }				
Farm dams . . .	31,008	192,295	6.8	42.4
Town water supplies . . .		803		0.2
<b>Total all sources . . .</b>		<b>453,562</b>		<b>100.0</b>

Because of the predominance of irrigation by private diversion pumping, most of the storages are used to release water downstream to maintain supplies for such diversion.

The following table shows details of the area of crops and pastures irrigated and the methods employed on land under irrigated culture during the 1971-72 season.

AREA OF LAND UNDER IRRIGATED CULTURE: QUEENSLAND, 1971-72  
(Acres)

	<i>Method of irrigation</i>					<i>Total area</i>
	<i>Spray</i>	<i>Furrow</i>	<i>Flood</i>	<i>Trickle</i>	<i>Multiple methods</i>	
Crops—						
Cereals . . .	38,328	32,696	23,757	..	114	94,895
Cotton . . .	643	11,936	920	..	130	13,629
Fruit . . .	9,363	248	173	986	434	11,204
Sugar . . .	54,577	68,255	15,189	..	6,262	144,283
Tobacco . . .	11,010	282	246	..	174	11,712
Vegetables . .	43,936	3,594	374	540	256	48,700
Other crops(a) .	8,362	11,135	3,786	73	280	23,636
<b>Total crops .</b>	<b>166,219</b>	<b>128,146</b>	<b>44,445</b>	<b>1,599</b>	<b>7,650</b>	<b>348,059</b>
Lucerne . . .	46,607	533	693	..	31	47,864
Pastures . . .	40,305	318	16,402	..	614	57,639

(a) Includes fodder crops.

### Irrigation areas

About 8 per cent of the area under irrigation in the State is concentrated in the four established Irrigation Areas constituted under the *Irrigation Acts*, 1922 to 1965, where the supply is generally reticulated by channel systems, by means of gravity or by pumping, from the storage. In addition some supply is also provided from streams regulated by the storage. Details of Irrigation Areas established and two under construction are set out below.

**Dawson Valley Irrigation Area.** The scheme is situated around the town of Theodore and the area is supplied by four weirs (with a capacity of 24,280 acre feet) on the Dawson River. Pumping stations deliver water through channel systems to 61 farms. Cotton and grain crops account for the major part of production from irrigated farms. In addition to irrigation demand the towns of Theodore and Moura and the Theiss Peabody Mitsui Mining Group obtain supplies from the storages.

**Burdekin River Irrigation Area and Water Supply Scheme.** This scheme is a complex system of water conservation, irrigation, industrial, urban and stock water supply. Storages are Eungella Dam on the Broken River, and Gorge and Blue Valley Weirs on the Burdekin River. From Eungella Dam, water is diverted directly by a privately owned 75 mile piped supply system to coal mining operations at Goonyella and Peak Downs and the town of Moranbah. Supplies for other purposes are maintained along the Bowen and lower 71 miles of the Burdekin River by release of water from the storages as required. These purposes and the arrangements for supply comprise (i) a pumping station on the Bowen River delivering supply through 21 miles of pipeline to the Collinsville Power Station, Collinsville Town and nine grazing holdings along the pipe line. (ii) Six pumping stations delivering water through channel systems to 152 individual irrigated holdings in Clare, Millaroo and Dalbeg sections of the Burdekin River Irrigation Area. Principal production crops from irrigated farms are sugar cane, rice and seed crops. (iii) private diversion by pumping for irrigation on individual holdings along the Bowen and Lower Burdekin Rivers.

**Mareeba-Dimbulah Irrigation Area.** This area is supplied by Tinaroo Falls Dam and weirs on the Barron and Walsh River systems. Water is delivered through channel systems and regulated streams to 562 farms on which the principal crop is tobacco. In addition, water is supplied to the towns of Mareeba, Dimbulah, Walkamin, Mutchilba and Tinaroo Falls and to the Hydro-electric Generating Station at Barron Falls.

**St George Irrigation Area.** This area is located near the town of St George and the principal storages for this area are Beardmore Dam (nearing completion) and Taylor Weir on the Balonne River and two weirs on Thuraggi Watercourse. Water is supplied to 20 farms on which the principal



crops are cotton and cereals and to the town of St George. The construction of works to extend the area by some 16 farms is in progress.

**Emerald Irrigation Area.** This scheme, a joint Commonwealth and State undertaking now under construction involves the construction of Fairbairn Dam (nearing completion) on the Nogoa River, some 12 miles upstream from Emerald. Water from this dam and associated irrigation, drainage and roadworks could ultimately serve 80 irrigation farms on which 32,000 acres could be irrigated annually. In addition, supplies will be provided for coal mining and urban water supply in the Blackwater area.

**Bundaberg Irrigation Scheme.** This is a joint Commonwealth and State undertaking, estimated to cost \$51.84 million aimed at raising the efficiency and security of the established sugar industry in the region. Phase 1 of the Scheme now under construction involves the construction of Monduran Dam (capacity 475,000 acre feet) on the Kolan River, tidal barrages on the Kolan and Burnett Rivers, pumping stations and distribution works. The scheme will ultimately provide an assured water supply to 1,485 assignments with a gross area of 119,830 acres and 5,000 acre feet annually to augment supplies to the city of Bundaberg.

### Irrigation projects

These are schemes established under the *Water Act* 1926 to 1968 where water from storage is released downstream to maintain adequate supplies for private pumping under licence, to land adjacent to the watercourse. Details of existing Irrigation Projects are set out in the following table.

IRRIGATION PROJECTS: QUEENSLAND

Project	Storage	Number of licensed pumps	Annual water allocation (acre ft.)	Water supplied 1971-72	
				Irrigation (acre ft.)	Other purposes (acre ft.)
Warrill Valley . .	Moogerah Dam . .	293	8,191	6,787	8,797
Mary Valley . .	Borumba Dam . .	147	4,358	2,821	1,662
Upper Condamine . .	Leslie Dam . .	69	11,660	8,414	483
Macintyre Brook . .	Coolmunda Dam . .	90	3,511	2,531	153
Upper Burnett . .	Wuruma Dam . .	251	21,124	19,001	511
Lower Lockyer . .	Atkinson Dam . .	141	6,038	2,955	..

Other projects currently under construction or approved are set out below.

**Logan River Project.** Maroon Dam, under construction on Burnett Creek, a tributary of the Logan River, is designed to permit expansion of irrigation from the present 3,475 acres to 9,900 acres along Burnett Creek and the Logan River for about 80 miles.

**Border Rivers Project.** The Dumaresq-Barwon Border Rivers Commission consisting of representatives of New South Wales and Queensland was created to control works on these rivers where they form the boundary between the two States, and to allocate the water. (For details see page 855).

**Leichhardt River Project.** This scheme, which involves the construction of Julius Dam on the Leichhardt River and a supply system to convey the water to the Mount Isa area is designed to provide water for the rapidly expanding needs of Mount Isa City and Mount Isa Mines Ltd and to maintain a reserve supply for possible other users in the foreseeable future. Construction of the dam commenced during 1972-73.

**Blackwater Water Supply.** Construction of a supply system with a capacity of 3,700 acre feet per annum from Bedford Weir to Blackwater and a capacity of 1,800 acre feet from Blackwater to Leichhardt Mine has been approved and will be completed in 1973. Initially to supply the Leichhardt Colliery and Town of Blackwater, the works are estimated to cost \$2.3 million.

### Rural, stock and domestic supplies

**Rural Water Supply Areas.** Improvements to stock and domestic water supplies are assisted by the development of Rural Water Supply Schemes, where water from a central source is distributed through pipelines to individual farms and properties. Investigation and design of these schemes are carried out by the Irrigation and Water Supply Commission. The schemes attract a Government subsidy of 50 per cent of the capital cost, the balance being provided by way of Government guaranteed loans raised by the individual water boards. Operation and maintenance costs and capital charges are wholly met by rates levied on benefited properties. Fourteen schemes are in operation with a total benefited area of 274,120 acres on 589 rural holdings.

**Bore Water Supply Areas.** Bore Water Supply Areas are constituted under the Water Act for the purpose of supplying water from artesian or sub-artesian bores to groups of adjoining properties for the watering of stock. The construction or acquisition of a bore and distribution system within an Area is financed by a Treasury loan, and rates calculated on the basis of area benefited are levied annually to meet loan repayments and maintenance and operating costs. Of the 60 Bore Water Supply Areas currently operating in the State, 54 are administered by the Commission and six by local boards elected by the ratepayers within the areas. A total daily flow of 23,398,000 gallons was distributed through some 2,374 miles of drains to serve a benefited area of 4,613,253 acres on 397 holdings.

#### **River improvement trusts**

These trusts are virtually autonomous bodies whose responsibility is to carry out and maintain works to improve stream channels, to increase their flood carrying capacity, to prevent or repair bank erosion and to mitigate flooding. Thirteen trusts are constituted throughout the State.

#### **Drainage areas**

Eight Drainage Areas—five in irrigation areas and three administered by autonomous drainage boards—have been constituted. These Areas served 296 holdings by 163 miles of drain; a total area of 61,337 acres being drained.

#### **Underground water supplies**

The availability of underground water in Queensland has played a very big part in the development of the pastoral industry, and of irrigation on individual farms, particularly along the coastal fringe. Underground water is also used very widely for irrigation, stock, and domestic purposes outside the Artesian Basin. Over half the area irrigated in Queensland receives its supplies from underground sources, and in accordance with the requirements of *The Land and Water Resources Development Acts*, 1943 to 1946, the investigation of availability of underground water is being pursued by geological mapping, investigation drilling and hydro-geological assessment. The most important areas where water from this source is used for irrigation are in the following river basins; the Lower Burdekin, the Don (Bowen), the Pioneer, the Callide Valley, the Lower Burnett, many parts of the Brisbane Basin, including the Lockyer, and parts of the Upper Condamine Basin.

**Burdekin Delta recharge.** For the first time in Australia, the artificial replenishment of underground water supplies has been implemented in the Burdekin Delta. The North and South Burdekin Water Boards divert unregulated supplies of water from the Burdekin River for the purpose of artificially recharging the underground supplies from which some 70,000 acres of sugar cane are irrigated and supplies for stock and domestic purposes, including the towns of Ayr and Home Hill are drawn.

**Artesian water.** The Great Artesian Basin in Queensland consists approximately of the area lying west of the Great Dividing Range, excluding the Cloncurry Mineral Field and the Barkly Tablelands. It comprises 434,000 square miles, or about two-thirds of the total State area. This part of the State is predominantly pastoral and is mainly dependent for water supplies on artesian and sub-artesian bores, and, where normal surface storage is not readily available, on excavated tanks. At 30 June 1972, a total of 3,265 artesian bores had been drilled in the Great Artesian Basin, of which 2,206 continue to flow, providing a supply of 195 million gallons per day. Although this supply will continue to diminish for a further 30 to 40 years, after that time a steady and continuous flow of some 130 million gallons per day is expected to be maintained.

#### **Stock route watering**

In 1935 the Trunk Stock Route System was inaugurated and from then on the construction of watering facilities on stock routes was greatly expanded. The Irrigation and Water Supply Commission acts as a constructing authority for the Stock Routes Co-ordinating Board in these matters, and had to 30 June 1972, completed 632 facilities with a further 7 under construction and 3 under investigation. The two authorities mentioned above carry out continuous investigation to ascertain general stock movements so that new facilities may be provided as required.

#### **Farm water supplies**

Under *The Farm Water Supplies Assistance Acts*, 1958 to 1965, technical assistance is available to landholders throughout the State on all matters relating to water conservation and utilisation for domestic, stock and irrigation purposes, on individual holdings or groups of holdings, covering construction of farm dams, irrigation bores and stock bores, and pumping and distribution systems. In addition, the Government provides finance to farmers by way of special Agricultural Bank loans, and technical advice on construction and installation. During 1971–72, 734 applications were received for assistance under these Acts, and \$446,527 was paid in advances by the bank, bringing advances over the 14 years of operation of the Acts to \$8,457,732.

## South Australia

Brief particulars of the climatic conditions in South Australia are given on page 1129 of Year Book No. 37. (See also the chapter Physical Geography and Climate of this issue.)

### Administration

Water supplies, other than irrigation works, are under the control of the Engineering and Water Supply Department, which administers the Waterworks Act, 1932-1971 and Water Conservation Act, 1936-1969, both of which empower the Minister of Works to impound or divert the water from any lake, watercourse or underground source for the purpose of establishing and maintaining public water supply schemes. The Waterworks Act, 1932-1971 governs the principal reticulated water supplies in proclaimed water districts throughout the State. A feature of these supplies is the extensive network of water mains supplying country townships and farmlands where local water resources are practically non-existent.

Under the Water Conservation Act, 1936-1969, small dams, wells, bores, rainsheds, storages and, in some instances, minor reticulation works are provided in remote areas to assist local settlers in development and to supply travellers and travelling stock.

### Irrigation

Australian irrigation originated in the upper Murray in South Australia and the Mildura area of Victoria. South Australian irrigation commenced with an agreement between the Government and the Chaffey brothers in 1887 whereby an area of land at Renmark was made available for the establishment of certain irrigation works. In South Australia, irrigation is almost exclusively confined to the Murray Valley. Except for quantities held in various lock pools, no water from the Murray is stored in South Australia. Water is either pumped onto the land or gravitated from the river.

The two major authorities administering irrigation areas are the Department of Lands and the Renmark Irrigation Trust. The Trust is controlled by a local board of management consisting of seven members. This area differs from other South Australian irrigation areas in that the land is freehold instead of leasehold. Every settler is entitled to vote for the election of Trust members. The Trust maintains eighty miles of reticulation channels, which are being progressively replaced by underground pipelines financed by Trust revenue, State Government grants and loans.

### Irrigated culture

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1971-72 season.

AREA OF LAND UNDER IRRIGATED CULTURE: SOUTH AUSTRALIA, 1971-72

(Acres)

							Method of irrigation					
							Spray	Furrow	Flood	Trickle	Multiple Methods	Total Area
Crops—												
Cereals	.	.	.	.		477		220	..	..		697
Fruit	.	.	.	.		22,349	8,302	181	981	234		32,047
Vegetables	.	.	.	.		13,788	1,676	98	55	137		15,754
Vineyards	.	.	.	.		10,690	25,356	994	1,914	194		39,148
Other Crops(a)	.	.	.	.		1,382	26	284	2	23		1,717
Total crops						48,687	35,360	1,777	2,952	588		89,363
Lucerne	.	.	.	.		31,212	40	9,355	..	139		40,746
Pastures	.	.	.	.		19,796	299	37,670	..	119		57,884

(a) Includes fodder crops.

### Water supply schemes

*Adelaide Metropolitan Water Supply.* Adelaide and surrounding areas of development including Elizabeth derive their water from nine reservoirs in the nearby Mount Lofty Ranges and by means of pumping stations and a pipeline from the Murray River at Mannum. The reservoirs have a storage capacity of 153,000 acre feet and the pipeline has a nominal capacity of 95,500 acre feet a year.



A second pipeline extending from Murray Bridge to convey River Murray water to the metropolitan supply system is under construction. This pipeline will initially have a capacity of 132,200 acre feet per year. The consumption for the whole area for the year 1971-72 was 120,460 acre feet. The capital cost to 30 June 1972 was \$153,395,000.

*Country reticulated supplies.* Areas extending to a distance of 90 miles north of Adelaide are supplied from the Warren, Barossa and South Para Reservoirs (50,470 acre feet) in the Barossa Ranges. Supplies to these areas are supplemented by River Murray water delivered into the Warren trunk main by a pipeline extending from Swan Reach to a point near Stockwell. This pipeline has a nominal capacity of 20,200 acre feet per year. Agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, and the Morgan-Whyalla Pipeline. The original 223-mile pipeline from Morgan to Whyalla and a second and larger pipeline completed in 1966 are at present able to carry 53,300 acre feet of water a year from the River Murray. A large part of Eyre Peninsula is supplied, through the 240-mile Tod River Main and the 104-mile East Coast Main, with water from the Tod River Reservoir (9,196 acre feet), the sand beds of the Uley-Wanilla Basin, the Lincoln Basin, and Poldia Basin. Along the Murray River all towns are supplied from the river. Water from the river is also reticulated through adjacent farmlands for up to 30 miles, and a pipeline extended from Tailem Bend to Keith provides the means of reticulating Murray water to numerous towns and a large area of farmlands in the upper south-east. Surface and underground resources have been developed to supply most rural centres not covered by the larger schemes. Water conservation and distribution works in country districts to 30 June 1972 have cost \$166,201,000 (exclusive of river control and irrigation works on the Murray River) and contain 8,659 miles of water mains.

#### **Underground water**

For information on underground water resources in South Australia *see* Year Book No. 55 and earlier issues.

#### **Farm water schemes**

The Department of Mines gives assistance to individual farmers in the provision of supplies from underground sources, and the Department of Agriculture provides an advisory service on water conservation and irrigation designs on farms, and on the suitability of surface and underground water for irrigation and stock purposes. In addition, a great part of the farming areas is supplied by the Engineering and Water Supply Department with water under pressure from extensive distributions systems connected to various reservoirs and the Murray River.

#### **South-eastern drainage**

In the south-east of South Australia it has been necessary to construct drainage schemes to dispose of surplus water from areas where a series of valleys or flats is separated by low ranges, parallel to the coastline, which prevent natural drainage. The Millicent Drainage System, completed in 1885, reclaimed 100,000 acres. The South-eastern Drainage Area System, which is controlled by the South-eastern Drainage Board, comprises drains constructed by the State Government at public expense, plus those undertaken by the Government in co-operation with the landholders. The area is bounded on the east by the State boundary, and on the west by the sea coast. It extends from about 55 miles north of Kingston, southerly to near Millicent and Kalangadoo. Up to 1948 about 430 miles of drains had been provided at a cost of \$1,441,752. These were of a developmental nature intended more to promote the rapid removal of floodwaters than to provide a complete system of drainage. Since 1948 the complete drainage of the Biscuit, Reedy Creek and Avenue Flats in the Western Division has been carried out. The southern section of 260,000 acres involved the excavation of 8,100,000 cubic yards in providing 343 miles of new or enlarged drains, whilst the northern area of 140,000 acres required the excavation of 3,051,500 cubic yards in the construction of 99 miles of drain.

The drainage of 727,000 acres in the Eastern Division of the South-east, situated east of Bakers Range and extending from near Kalangadoo to north of Naracoorte, was commenced, in 1960 and completed in 1970. The work required the construction of a main diversion drain (consisting of the enlargement of 24 miles of existing drain and the construction of 22 miles of new drain) from the sea at Beachport to the Naracoorte-Mount Gambier railway line near Struan. The provision of new branch drains and the enlargement and extension of existing branch drains completed the approved works. A total excavation of 7,300,000 cubic yards over a length of 117.5 miles of new or enlarged drains was involved.

The capital cost of drainage in the South Eastern Drainage Area System to 30 June 1972 was \$18 million, and the length of drains constructed was 875 miles. An extensive system of private drains (many of which discharge into drains constructed under Government authority) also exists in the South-east of the State.

### Murray River Irrigation Areas

Where irrigation water in excess of plant requirements has been applied, perched water tables develop. Rising to the level of tree roots, these cause the death of orchards from salination and water-logging. Most orchards and vineyards are now drained by plastic and tile drainage systems, thus restoring their health and productivity. Disposal of drainage water is achieved by pumping to basins on river flats where it evaporates, or by discharge into the river when flow is high. It may also be discharged into underlying sand and limestone aquifers. The usefulness of these aquifers is declining as they are becoming fully charged with water.

## Western Australia

Brief particulars of the climatic conditions in Western Australia are given on page 1133 of Year Book No. 37. (See also the chapter Physical Geography and Climate of this issue.)

### Administration

The Minister for Water Supply, Sewerage and Drainage administers the departmental irrigation schemes under the *Rights in Water and Irrigation Act, 1914-1971*. He is advised by an Irrigation Commission representing the local irrigationists and governmental, technical and financial branches. He also administers, under the *Country Areas Water Supply Act, 1947-1964*, the water supplies to certain country towns and reticulated farmland. As Minister for Works he controls minor non-revenue producing supplies to stock routes and a few mines and agricultural areas with their associated communities. A small number of town supplies are administered by local boards under the *Water Boards Act, 1904-1969*, which provides a large degree of autonomy with ultimate Ministerial control.

### Irrigation

Irrigation schemes have been established by the Government on the coastal plain south of Perth in the Waroona, Harvey and Collie River Irrigation Districts between Waroona and Dardanup, the water being channelled from dams in the adjacent Darling Range.

Logue Brook Dam with a capacity of 19,717 acre feet, Harvey Weir (7,194 acre feet) and Stirling Dam (46,191 acre feet) supply the Harvey Irrigation District, the rated area of which is 13,783 acres. The Harvey District links up with the Waroona Irrigation District, which is served by Waroona Dam (12,105 acre feet), Drakes Brook Dam (1,855 acre feet) and Samson Brook Dam (7,437 acre feet) and comprises a rated area of 3,483 acres. Wellington Dam on the Collie River with a capacity of 150,107 acre feet serves an area of 12,115 rated acres in the Collie River Irrigation District. Pastures for cattle comprise 88.6 per cent of water usage in these districts. Glen Mervyn Dam (1,209 acre feet) stores water for regulated release down the Preston River for irrigation of orchards and crops when the natural summer stream flow is insufficient to meet the demand.

Since the mid 1930's, a centre of tropical agriculture has been developed at Carnarvon, near the mouth of the Gascoyne River. Private pumping from sands of the Gascoyne River is the principal source of irrigation water for the 158 plantations. Because of the high risk of drawing in surrounding saline ground waters by over-pumping, the usage of water by the planters is controlled strictly by the Government. The Government is developing up-river sources and delivers water by pipeline to 70 plantations in the district. Bananas for the Perth market and fruit and vegetables for the Perth and Adelaide markets are the principal crops. A tropical research station is maintained at Carnarvon by the Department of Agriculture.

A project has been embarked upon to provide water supplies for irrigation in the area traversed by the Ord River in the Kimberley Division. The project provides for the eventual development of an area of 178,000 acres of land agriculturally and topographically suitable for irrigation.

The first stage, in which water was supplied to 30 farms averaging 660 acres plus a 2,400 acre pilot farm from the Bandicoot Bar Dam with a capacity of 80,000 acre feet, was completed in 1965. Cotton has been the principal crop but considerable interest is now being shown in grain sorghum. The Ord River Dam was completed in 1971 and will store 4.6 million acre feet in Lake Argyle to serve a further area of 148,000 acres, approximately one-third of which is located in the Northern Territory.

On the Liveringa flood plain, water is diverted from the Fitzroy River into a dam on Uralla Creek, which together with a natural storage of about 1,200 acre feet, provides for irrigation at Camballin 65 miles south-east of Derby. Grain and fodder sorghums are grown in the area.

**Irrigated culture**

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1971-72 season.

**AREA OF LAND UNDER IRRIGATED CULTURE: WESTERN AUSTRALIA, 1971-72**  
(Acres)

	<i>Method of irrigation</i>					<i>Total area</i>
	<i>Spray</i>	<i>Furrow</i>	<i>Flood</i>	<i>Trickle</i>	<i>Multiple methods</i>	
Crop—						
Cereals . . . . .	154	1,870	1,922	3	3	3,952
Cotton . . . . .	..	9,540	..	..	..	9,540
Fruit . . . . .	9,638	789	305	1,951	605	13,288
Vegetables—						
Potatoes . . . . .	4,812	32	25	13	52	4,934
Other . . . . .	3,752	1,278	254	43	75	5,402
Vineyards . . . . .	875	38	97	307	27	1,344
Other Crops(a) . . . . .	801	249	49	3	3	1,105
<b>Total crops . . . . .</b>	<b>20,032</b>	<b>13,796</b>	<b>2,652</b>	<b>2,320</b>	<b>765</b>	<b>39,565</b>
Lucerne . . . . .	3,489	6,880	25,563	511	347	36,790
Pastures . . . . .	1,561	..	64	1	26	1,652

(a) Includes fodder crops.

**Country water supplies controlled by Department of Public Works and Water Supply**

Since 1947 enlargement and extensions of the Goldfields and Agricultural Water Supply and the development of the Great Southern Towns Water Supply have been carried out, mainly in accordance with a project known as the Modified Comprehensive Scheme. Under this scheme water has been supplied to towns and farms in an area of five million acres in mixed farming (cereal and sheep) districts of Western Australia. The modified scheme was completed in 1961 at a cost of \$20.6 million, of which the Commonwealth contributed \$10 million under the *Western Australia Grant (Water Supply) Act 1948*. A further request was made by the State Government in 1963 for a grant of \$10.5 million representing half the estimated cost of proposed extensions which would increase by 3.7 million acres the area served by the scheme. The Commonwealth agreed to provide assistance in the form of an interest-bearing loan up to a maximum of the amount requested, advances to be made during a period of eight years commencing 1965-66. Legislative authority for the loan is given by the *Western Australia (South-west Region Water Supplies) Agreement Act 1965*.

Mundaring Reservoir on the Helena River, 26 miles from Perth, is the source of water supplied to the Eastern Goldfields. It has a capacity of 62,435 acre feet and is connected to Kalgoorlie by a pipeline with extensions to towns and agricultural areas. At 30 June 1972 the Goldfields and Agricultural Water Supply was serving 112 towns and localities, and water was being reticulated to farms in an area of 6.2 million acres. The total length of pipelines was 4,654 miles and the number of services was 26,670. Consumption during 1971-72, including supplies drawn from local schemes and from the Metropolitan Water Supply, was 3,885 million gallons.

The Great Southern Towns Water Supply pipes water from Wellington Dam to towns on the Great Southern Railway from Brookton to Katanning as well as a number of other towns. At 30 June 1972 the Supply was serving 30 towns and water was being reticulated to 1.5 million acres of farmland. The total length of pipelines was 968 miles, and the number of services was 10,202. Consumption during 1971-72, including supplies drawn from local sources, was 897 million gallons.

One hundred and twenty-eight local schemes supply water from stream flow, dams, tanks, wells, and bores, mainly to country towns. At 30 June 1972 the total length of water mains was 1,157 miles and the number of services was 33,677.

**Other country water supplies**

As well as the schemes controlled by the Department of Public Works and Water Supply, there are four local Water Boards which draw supplies from stream flow, dams, wells, and bores. In addition, some local authorities supply water within their boundaries. The Forests Department, sawmilling companies, and mining companies operate schemes to supply water to their towns and



operations. Railways of the Commonwealth and State Governments make independent provision for supplies of water for their own purposes, although considerable additional quantities are consumed by the railways from other sources, such as those controlled by the Department of Public Works and Water Supply and the Metropolitan Water Supply, Sewerage and Drainage Board.

### **Underground water**

For information on underground water resources in Western Australia *see* Year Book No. 55 and earlier issues.

## **Tasmania**

Brief particulars of the rainfall pattern in Tasmania are given on page 1136 of Year Book No. 37. (*See also* the chapter Physical Geography and Climate of this issue.)

### **Main purposes of water conservation and utilisation**

Because of the generally more adequate rainfall in Tasmania, scarcity of water is not such a problem as it is in most mainland areas, though not all streams are permanently flowing. The only large scale conservation by reservoirs is for hydro-electric power generation, but there are some moderately sized dams built by mining and industrial interests and by municipal authorities for town water supplies. 'Run of the river' schemes are quite adequate for assured supply in many municipalities. The main supply for Hobart and adjacent municipalities originates from a 'run of the river' scheme based on the Derwent River. The river is controlled in its upper reaches by eight dams, built for hydro-electric power generation, and these tend to stabilise river flow.

Until a few years ago irrigated areas were negligible except for long established hop fields, but there is a rapidly expanding use of spray irrigation on orchards, pastures, potatoes, and beans. Until recent years there has been almost complete dependence on natural stream flows, but the need for some regulating storages has become apparent. Increasingly, farmers are constructing storages of their own, and the extension of this practice is foreseen as the logical solution in most areas, as valleys are narrow and steep sided. Single large reservoirs cannot economically serve large areas of suitable land, as nearly every valley is separated from others by pronounced hills, prohibiting the construction of cross-country channels.

Underground water suitable for stock, minor irrigation works and domestic use is exploited in the consolidated rocks of southern, midlands and north-western Tasmania. In the south and midlands nearly all groundwater is obtained from Permian and Triassic rocks. In the north-west, water is recovered from a variety of rocks ranging from Precambrian dolomites, quartzites and schists to Tertiary basalts and Quaternary sands. The highest yields are obtained from the dolomites and the basalts. In the central north and north-east unconsolidated Tertiary clays and gravels yield water of variable quality, and in some coastal areas, notably King and Flinders Islands, water is obtained from Aeolian sands.

The Mines Department is charged with the investigation of underground water resources and is currently drilling in the Longford (central north) and Scottsdale-Bridport (north-east) Tertiary areas, and is also examining the prospects of coastal sand supplies on the East Coast. There is a great reserve of untapped permanent streams in the western half of the State, which is largely unsettled. The State's largest rivers discharge in the west, but diversion to the eastern half of the watersheds is not regarded as practicable.

### **Administration**

In Tasmania, water supply was once exclusively the responsibility of local government authorities, but two statutory authorities, the Metropolitan Water Board and the Rivers and Water Supply Commission, now operate bulk supply schemes, piping water for distribution by the local government authorities in the Hobart and Launceston regions, and directly to certain industrial consumers.

*Metropolitan Water Board.* The overall control of the supply of water to the cities of Hobart and Glenorchy and the municipalities of Kingborough and Clarence is vested in the Metropolitan Water Board, the local government authorities retaining primary responsibility for reticulation and sales to consumers. Water is also supplied by the Board to urban areas in the Sorell, New Norfolk and Brighton municipalities. The major source of water is the River Derwent at Lawitta, where two pumping stations are installed. The Metropolitan Water Board controls two schemes, the West Derwent Water Supply and the Southern Regional Water Supply. The first was originally constructed

to serve Hobart, Glenorchy, Kingborough and Clarence; the second constructed by the Rivers and Water Supply Commission, but now under the control of the Board, serves that portion of Greater Hobart situated on the eastern shore of the River Derwent. The responsibility for raising loans and debts servicing necessary to meet the capital cost of constructing and adding to the schemes rests with the Metropolitan Water Board.

*Rivers and Water Supply Commission.* The Commission is empowered by the *Water Act 1957* to take water at streams and lakes, or to issue others with licences to do so; licensing covers supply to specific industries and municipalities as well as irrigation. The Commission is concerned with drainage trusts' operations, river improvements (including repairs after flood damage), stream gauging, its own regional water schemes, and with water supply, sewerage and drainage of towns. It operates in a similar manner to the Metropolitan Water Board in controlling the water schemes serving the East Tamar region (North Esk Regional Water Supply), the West Tamar area (West Tamar Water Supply) and the Prosser River Scheme, which supplies water to a sodium alginate industry at Louisville near Orford, and supplements the water supply of the township of Orford. The North Esk Regional Water Supply was constructed to meet industrial requirements of the aluminium refinery and other industries at Bell Bay, and to provide bulk supplies to surrounding municipalities on the eastern bank of the River Tamar. The West Tamar Water Supply was constructed primarily to meet domestic requirements of urban areas in the Beaconsfield municipality. The local government authorities retain primary responsibility for reticulation and sale to consumers, except to certain industrial users.

In municipalities not serviced by the Metropolitan Water Board or the Rivers and Water Supply Commission, the supply of water is a function of the local municipal council. Where the construction of water and sewerage schemes is beyond the financial capacity of a local government authority, or if it requires assistance to pay for water supplied from regional schemes, the Commission may make recommendations to the Minister for payment of a subsidy.

#### **Industrial water schemes**

Four principal industrial water schemes have been installed privately—for a paper mill near Lawitta on the Derwent River, for a paper mill at Burnie using water from the Emu River, for another at Wesley Vale using water from the Mersey River, and for a factory at Heybridge reticulating water from Chasm Creek. The State Government has constructed some water schemes for use primarily for industrial purposes. These include the scheme serving the aluminium refinery at Bell Bay referred to above, a storage supplementing the summer flows of the Kermadie River for use by a wood-pulping plant at Geeveston, and the Prosser River Scheme referred to above.

#### **Irrigation**

The Cressy-Longford Irrigation Scheme has commenced operations servicing some 40 farms with irrigation water by either flood or spray sprinkler systems. This scheme, which was designed and is operated by the Rivers and Water Supply Commission, involves the diversion of water from the tailrace of the Poatina hydro-electric power station through some 60 miles of earthen channels to irrigate eventually some 20,000 acres. At least half this area will be served by gravity and it is estimated that under maximum development 6,000 acre feet of water annually would be available to farmers both inside and outside the irrigation district. The scheme will provide an augmented flow to two rivers which will increase the amount of water available for irrigation by downstream landowners. It is expected that the scheme will be fully operational for the 1973-74 irrigation season.

The Rivers and Water Supply Commission has completed preliminary investigations for establishing schemes in the valleys of the Jordan, Coal and Meander Rivers. It is currently investigating possible schemes to serve the Winnaleah area and the Brid River valley.

With the exception of the Cressy-Longford Scheme and a privately owned scheme at the Lawrenny estate at Ouse there are no other extensive irrigation works utilising one common source of water supply in Tasmania. A large portion of the area under irrigation in the State is watered by private schemes pumping water from natural streams.

**Irrigated culture**

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1971-72 season.

**AREA OF LAND UNDER IRRIGATED CULTURE: TASMANIA, 1971-72**  
(Acres)

	Method of irrigation					Multiple methods	Total area
	Spray	Furrow	Flood	Trickle			
Crops—							
Cereals . . . .	1,568	..	..	..	..	1,568	
Fruit . . . .	6,614	87	264	102	330	7,397	
Vegetables—							
Potatoes . . . .	5,525	13	..	..	30	5,568	
Other . . . .	6,891	3	1	..	5	6,900	
Other crops(a) . . . .	2,257	437	330	..	23	3,047	
Total crops . . . .	22,855	540	595	102	388	24,480	
Lucerne . . . .	2,154	..	25	..	..	2,179	
Pastures . . . .	12,633	1,500	8,221	..	55	22,409	

(a) Includes fodder crops.

**Northern Territory**

Some particulars of the climate and main topographical features of the Northern Territory are given on page 1138 of Year Book No. 37, and in this issue information on climatic conditions will be found in the chapter Physical Geography and Climate, and a brief outline of contour and physical characteristics in Chapter 28, The Territories of Australia.

**Administration**

Under the *Control of Waters Ordinance* 1938-1971 of the Northern Territory, natural waters are vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases) and the diversion of water is prohibited except under prescribed conditions. The Ordinance requires that drilling for ground-water be carried out only by drillers who are registered under the Ordinance. Registered drillers are required to provide the Government with information on bores drilled including the location, depth and size of bore, strata encountered and water produced. In particular areas, described as Water Control Districts, where stricter control is necessary the construction or use of a well or water bore without a permit can be prohibited.

Under the *Water Supplies Development Ordinance* 1960-1971 any landholder engaged in pastoral or agricultural production may seek information or advice from the Commissioner of Water Development who is appointed under the Ordinance. He may also apply for an advance towards the cost of work proposed to be carried out. The Ordinance also provides for a refund to the landholder of the cost of drilling an unsuccessful bore where the landholder had applied to the Commissioner for advice on its construction and has carried out all drilling operations in accordance with advice given.

There is a Water Resources Branch of the Department of the Northern Territory under the control of a Director. The Branch carries out systematic stream gauging, the collection of data relating to the quantity and quality of surface and groundwater, the planning of water use for irrigation and town water supplies, and flood prevention and control. It also provides a general advisory service to the public on water resources and water conservation by providing information on the geology of the Territory, the prospects of obtaining groundwater, the possible location of bore sites, the method of drilling and equipping bores, information on stream flows, surveys of dam sites, the design of water supply schemes and reticulation layouts, and on the chemical and bacteriological quality of water supplies.

**Underground water**

For information on underground water resources in the Northern Territory see Year Book No. 55 and earlier issues, and the Australian Water Resources Council's 1972 publication, "Ground-water Resources of Australia".



At 30 June 1972, 7,981 bores and wells were registered in the Northern Territory. Of these 4,753 were for pastoral use, 415 for agricultural use, 645 served town domestic water supplies, 140 were in use on mining fields, 906 were investigation bores, 431 were Government established stock route bores and 691 were classified under other uses. These include successful bores which have collapsed and bores which were unsuccessful owing to drilling difficulties, or to insufficient quantity or poor quality of underground water.

#### **Community water supplies**

The largest water conservation projects in the Territory are the Darwin River Dam (210,000 acre feet) and the Manton Dam (12,700 acre feet) which both serve Darwin with a reticulated water supply. Groundwater is also pumped from McMinns Lagoon area to augment supply.

Most other towns and communities are supplied by groundwater. A few are supplied by both ground and surface waters depending on relative quality variations throughout the year.

#### **Surface water measurement**

The hydrological investigations required in the Northern Territory as part of the National Water Resources Assessment Programme are being carried out by the Water Resources Branch. The program for the Northern Territory includes establishment of base gauging stations and pluviograph rainfall recorders. In particular areas of development where water supply or irrigation proposals require special or extra surface water data, supplementary gauging stations are built to obtain this information. At 30 June 1972, the Northern Territory stream-gauging network comprised 272 operating stations; of these 198 were base gauging stations and 74 were supplementary gauging stations.

Irrigation for agricultural purposes in the Territory is not extensive, being confined to isolated areas near the Darwin, Adelaide River, Coomalie Creek, Daly River, Katherine River, Wickham River, Douglas River, Edith River and Alice Springs area, with only small acreages being utilised. In the Territory 81 licences to divert water from streams were current at 30 June 1972. The total licensed area for irrigation is 5,130 acres, but the actual area irrigated is less than this. There are also a number of farms irrigated from bore supplies, particularly in the Alice Springs area. Purposes for which irrigation water is used include the growing of fruit, vegetables, crops and pastures, and also dairying and mixed farming.

Both the Daly and Adelaide Rivers appear to offer considerable potential for irrigation development with regulation of the rivers. Extensive investigations are being conducted into possible dam sites and areas of land suitable for irrigation in the region, and there is a need for other associated studies. Irrigation trials are in progress using water from the high-production bores in the Daly Basin. Further exploratory drilling in this area is being carried out. There is an increasing demand for water resource assessment studies and assistance for relatively small irrigation projects.

Investigations are continuing into areas of the Northern Territory which may be suitable for irrigation from the main storage on the Ord River in Western Australia.

### **Australian Capital Territory**

The climate of the Australian Capital Territory (*see* Chapter 2) with its moderate rainfall and high evaporation over the growing season is such that water conservation and irrigation are practised.

Groundwater in the A.C.T. and environs occurs mainly in fractures, joints and weathered zones of crystalline rocks such as porphyry, granite, limestone and metasediments. Alluvial aquifers are restricted to the Lake George basin and small areas along mature sections of the Molonglo and Murrumbidgee Rivers. Very minor perched aquifers occur. Recharge mainly takes place in the cooler months of the year.

Currently there are 103 bores for all purposes in the A.C.T.; 69 cater for domestic, stock and irrigation purposes, four are for industrial purposes and 30 are observation bores which the Bureau of Mineral Resources has progressively established over the past 12 years as part of its policy of assessing the groundwater resources of the region and gathering basic hydrogeological data. The yield from the bores ranges mainly from 100 to 1,800 gph and exceptionally to 10,000 gph.

In 1971-72, a total area of 971 acres was under irrigated culture in the A.C.T. The crop areas were orchards, 17 acres; vegetables, 113 acres; nurseries, 5 acres; fodder crops, 59 acres; lucerne for hay, 370 acres; and pastures accounted for 407 acres. Of the total area irrigated, 848 acres was irrigated from surface sources, 115 acres from bores and 8 acres from the reticulated water supply. The spray method of irrigation was utilised on 967 acres.

Control of irrigation and farm water supplies is exercised by the Conservation and Agriculture Branch of the Department of the Capital Territory. The Bureau of Mineral Resources of the Department of Minerals and Energy provides technical advice on groundwater, and occasionally on run-off, to landholders.

Water conservation on farm holdings was shown to be deficient in the severe 1965–68 drought when stock were moved to areas outside the A.C.T. Improvements by the provision of additional or larger farm dams and of bores have been made in recent years.

### **Papua New Guinea**

Rainfall in Papua New Guinea varies considerably from approximately 240 inches near Lindenhafen (New Britain) and 230 inches at Kikori (Papua) to about 70 inches near Marienburg (New Guinea) and 40 inches at Port Moresby (Papua). For a general description of these territories *see* Chapter 28, The Territories of Australia of this Year Book. Irrigation has not been developed on any organised basis owing to the availability of high rainfall and the nature of agricultural development.

Papua New Guinea is well served with large rivers deriving their water from heavy tropical rains and high mountains which rise to over 14,000 feet, but complete data regarding water resources are not available. During 1971–72 the Government continued the development of a national network of stream-gauging stations which can be used in assessing the water resources of Papua New Guinea, while continuing to collect more detailed hydrological data for proposed hydro-electric projects.

The largest rivers in the Territory include the Fly (700 miles long, situated in the Western division of Papua), the Sepik (700 miles), the Ramu (450 miles), the Purari (300 miles), and the Markham (110 miles). The main water conservation interest in New Guinea at present is the hydro-electric potential, which is extensive. An outline of schemes at present in operation is given in Chapter 28 The Territories of Australia.

## CHAPTER 24

# FORESTRY

### Source of statistics

Statistics relating to forestry are, in general, provided by the various authorities concerned with forestry administration. Statistics relating to forest products and employment in forestry contained in this chapter have been collected by the Statisticians of the various States, mainly from information provided by the State forestry authorities. Other information on forested areas has been provided by the Commonwealth Forestry and Timber Bureau. Statistics of sawn timber and by-products and manufacturing establishments engaged in their production have been compiled from the annual censuses of manufacturing undertaken by the Statisticians in the several States. Data on imports and exports of forest products and sawn timber and timber products have been compiled in the Commonwealth Bureau of Census and Statistics as part of the statistics of overseas trade. The figures shown relate, in general, to years ended 30 June.

### Forestry in Australia

#### Objects of forestry

The main object of forestry authorities is to manage the forests of the country in a manner that will provide the maximum benefits, both direct and indirect. Direct benefits include the provision of essential commercial commodities such as structural timber, pulpwood, plywood, veneers, firewood, bark products, tars, oil, and resins. Indirect benefits include protection of soil and stock from wind and exposure, regulation of stream flow, provision of recreational facilities, and aesthetic effects. Forestry also aims at improving existing forests and woodlands by properly controlled harvesting, by protection from such destructive agencies as fire and insect attack, and by inducing regeneration. The provision of a partial tree cover on denuded lands where this cover is necessary for protective purposes, and a complete cover when the land is better under forest than under any other land use, are further aims of forestry.

#### General account of forests and timbers

The area of land in Australia suitable for the production of commercial timber as a primary crop is very small in comparison with the size of the continent. Broadleaved forests (hardwoods) cover 76 per cent of the total forested area, and approximately 95 per cent of the broadleaved forest area is occupied by eucalypts.

*Eucalypts.* The genus *Eucalyptus* is remarkable in that it includes some 500 known species, ranging in size from the mighty forest giants, mountain ash (*E. regnans*) of Victoria and Tasmania, and karri (*E. diversicolor*) of Western Australia, down to the small mallee species which inhabit vast areas of the inland. The habitats range from the inland plains to the high mountain areas in the Australian Alps, and from areas with the annual rainfall as low as 10 inches to those where it is 150 inches. Of the 500 species, only about 100 are used for sawmilling, and not more than 40 of these are exploited extensively.

The better class of eucalypt forest is concentrated mainly in the higher rainfall areas such as the east coast, the highlands of southern New South Wales, Victoria and Tasmania, and the south-western corner of Western Australia. The more important species include blackbutt (*E. pilularis*), tallowwood (*E. microcorys*), flooded gum (*E. grandis*), and red mahogany (*E. resinifera*) of New South Wales and Queensland; alpine ash (*E. delegatensis*) of New South Wales, Victoria and Tasmania; mountain ash (*E. regnans*), messmate (*E. obliqua*) and blue gum (*E. bicostata*) of Victoria and Tasmania; and karri (*E. diversicolor*) of Western Australia. For height and grandeur, mountain ash and karri are unequalled among the broadleaved trees of the world and are excelled only by a few North American coniferous (softwood) species.

In the coastal regions with lower rainfall the eucalypt forests contain many durable species such as the ironbarks, grey gums and bloodwoods of the east coast, and jarrah (*E. marginata*) and tuart (*E. gomphocephala*) of Western Australia. The spotted gum (*E. maculata*) occurring in New South Wales and Queensland is another example.



Along most of the inland streams and adjacent flood-plains there are riverain forests consisting mainly of river red gum (*E. camaldulensis*), a very durable tree which has supplied large quantities of sawn timber, railway sleepers and fence posts.

Eucalypts also occur in open forest and savannah woodland formations in areas receiving a reliable rainfall of about 10 to 20 inches per annum, as on the goldfields of Western Australia where salmon gum (*E. salmonophloia*), brown mallet (*E. astringens*) and wandoo (*E. wandoo*) occur. These trees are of considerable value for firewood, as mining timbers and for fencing. Minor forest products such as sandalwood, tan bark, essential oils, etc., also come from isolated areas in this type of country, and in the more arid areas.

*Other broadleaved timbers (hardwoods).* Broadleaved genera other than *Eucalyptus* cover a comparatively small portion of the forested land in Australia; however, the areas concerned provide a great variety of timbers suitable for a multitude of uses. There are two basic types of forest containing supplies of broadleaved timbers other than eucalypts, namely, the tropical and sub-tropical rainforests of coastal Queensland and New South Wales and the temperate rainforests of southern Victoria and Tasmania, both of which yield species known collectively as rainforest or brushwood species.

The tropical and sub-tropical rainforest along the eastern coast of Australia contains a large number of different species. Tropical rainforest occurs in northern Queensland in the vicinity of Cairns and on the Atherton Tableland, providing such well-known cabinet woods as Queensland maple (*Flindersia brayleyana*), Queensland walnut (*Endiandra palmerstonii*) and the silky oaks. The sub-tropical rainforest found in southern Queensland and northern New South Wales yields the tulip oak, crab apple (*Shizomeria ovata*) and white beech (*Gmelina leichhardtii*). Coachwood (*Ceratopetalum apetalum*) and sassafras (*Doryphora sassafras*) occur in regions to the south near Dorriggo and have yielded valuable timber for many years.

Temperate rainforest which is to be seen in southern parts of Victoria and western Tasmania consists mainly of myrtle beech (*Nothofagus cunninghamii*), but produces also southern sassafras (*Atherosperma moschata*) and blackwood (*Acacia melanoxylon*).

Turpentine (*Syncarpia glomulifera*), an excellent harbour pile timber resistant to marine borer attack, and brush box (*Tristania conferta*), a superior structural and decking timber, are found in association with some eucalypts in the wetter rainfall areas on the north coast of New South Wales and in southern Queensland.

*Conifers (Softwoods).* One of the most important species of native conifers is white cypress pine (*Callitris columellaris*). The main cypress pine forests of commercial value occur in New South Wales and southern Queensland west of the Great Dividing Range. The trees are comparatively small, but the timber has particular value owing to its durability including resistance to termites. It is suitable for use as scantlings, flooring, linings, weatherboards, poles, and posts. As much of the area originally covered by cypress pine has been cleared for wheat farming and grazing, the production from the remaining State forests is now strictly regulated to ensure a continuous supply.

Another important native conifer is hoop pine (*Araucaria cunninghamii*), which occurs naturally in the sub-tropical rainforest of southern Queensland and northern New South Wales associated with tulip oak, crab apple, white beech, coachwood, and sassafras. The greater part of the original hoop pine forests has been exploited, but considerable areas have been replanted to this species in Queensland and, to a lesser extent, in New South Wales.

Other native conifers which have played a useful but minor part in the Australian timber industry include bunya and kauri pines (*Araucaria bidwillii* and *Agathis palmerstonii*) of Queensland, and celery-top, Huon and King William pines (*Phyllocladus asplenifolius*, *Dacrydium franklinii* and *Athrotaxis selaginoides*) of Tasmania. Kauri pine is found in the tropical rainforest of northern Queensland in association with non-eucalypt broadleaved trees, while bunya pine occurs in the sub-tropical rainforests. In the temperate rainforests of Tasmania celery-top, Huon and King William pines are found in association with myrtle beech, southern sassafras and blackwood.

### Extent of forested areas

Estimates prepared for the Food and Agriculture Organisation World Forest Inventory 1970, show the total area of forests plus other wooded areas as 340.4 million acres in 1970. This represents a smaller figure than the previously published result of a similar survey taken in 1965 for the Food and Agriculture Organisation which showed the total area of forests and woodlands as 599.7 million acres. The difference is largely explained by the fact that the definition of 'woodland' was changed considerably between the two reference dates.

## CLASSIFICATION OF FOREST AREA(a): AUSTRALIA

(Source: Forestry and Timber Bureau)

('000 acres)

<i>Types of forest</i>	<i>Area</i>
<b>FORESTS AND OTHER WOODED AREAS</b>	
Forests under exploitation . . . . .	65,269
Forests not under exploitation(b)—	
Excluded from exploitation by law . . . . .	4,978
Other . . . . .	23,498
<i>Total forests</i> . . . . .	93,745
Other wooded areas(c) . . . . .	246,625
<b>Total forests and other wooded areas</b> . . . . .	<b>340,370</b>

## OWNERSHIP OF FORESTS

<b>Publicly-owned forests—</b>	
State forests . . . . .	41,355
Other forests . . . . .	30,270
<i>Total publicly-owned forests</i> . . . . .	71,625
Privately-owned forests . . . . .	19,412
Ownership not yet determined . . . . .	2,708
<b>Total forests</b> . . . . .	<b>93,745</b>

(a) Date of inventory 31 March 1970. (b) Areas of lowgrowing mallee and similar associations of woody vegetation are not included.  
(c) Includes woodlands, scrublands, etc., not regarded as forests.

## Forest reserves

The distribution of forest reserves is shown by States and Territories in the following table. Detailed comparisons between States are not possible because of the lack of uniform definitions.

## FOREST RESERVES: STATES AND TERRITORIES, 31 MARCH 1972

(Source: Forestry and Timber Bureau)

('000 acres)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Production reserves(a)—</b>									
Productive . . . . .	5,865	4,042	9,402	228	4,109	3,327	3	31	27,007
Unproductive . . . . .	806	1,327	..	29	..	1,279	138	..	3,579
Unstocked . . . . .	660	116	..	..	713	512	1	..	2,002
<i>Total production reserves</i>	7,331	5,485	9,402	257	4,822	5,118	142	31	32,588
<b>Protection reserves(b)—</b>									
Productive . . . . .	..	957	2,551	3	33	425	..	14	475
Unproductive . . . . .	30	..	..	47	110	22	1,200	97	5,014
Unstocked . . . . .	..	..	..	..	28	..	314	..	342
<i>Total protection reserves</i>	30	957	2,551	50	171	447	1,514	111	5,831
<b>All other reserves(c)—</b>									
Productive . . . . .	641	..	..	..	..	..	..	..	641
Unproductive . . . . .	296	151	..	..	..	..	..	..	447
Unstocked . . . . .	49	..	..	..	..	..	(d)	..	49
<b>Total area all reserves</b> . . . . .	<b>8,347</b>	<b>6,593</b>	<b>11,953</b>	<b>307</b>	<b>4,993</b>	<b>5,565</b>	<b>1,656</b>	<b>142</b>	<b>39,556</b>

(a) Land permanently dedicated to timber production. (b) Includes flora and fauna reserves, scenic reserves, state and national parks, and water catchment areas. (c) Includes other timber reserves, land reserved for fuel supply, and vacant forested crown land. (d) Excludes Aboriginal reserves in the N.T. totalling 62,348,000 acres which are estimated to be 90 per cent forest.

### Categories of forest reserves

- (i) *Production reserves* consist of forest lands 'permanently' reserved—by law whether Federal, State or local—for the production of logs, pulpwood, pit props, poles, posts or fuelwood for commercial purposes.
- (ii) *Protection reserves* consist of reserved lands, the management of which is principally aimed at the protection of natural resources, of fauna and flora, or at other purposes not directly related to the production of wood (e.g., parks, watersheds, soil conservation areas, etc.). Industrial cutting may or may not be allowed in these protection reserves. Industrial cutting includes the cutting of logs, pulpwood, pit props, poles, posts or fuelwood for commercial purposes. The cutting of logs for the production of sawnwood for local consumption is considered as industrial cutting; however, the cutting of poles and fuelwood for personal consumption on a casual or occasional basis is not considered as an industrial cutting.
- (iii) *All other reserves* consist of reserved forest lands not included above.

A considerable proportion of the permanently reserved areas is in inaccessible mountainous country, and many of the forests contain a mixture of species, only some of which are at present of commercial value. Much of the area consists of inferior forest, and a large proportion of the whole has been seriously degraded by recurrent fires.

## Softwood plantations\*

### General

The term "softwood" has long been used to represent the wood of the Coniferae, of which the most important family is the Pinaceae. This family consists primarily of trees and includes such well known producers of commercial timbers as the genera *Pinus* (pines), *Picea* (spruces), *Abies* (firs) and *Pseudotsuga* (Douglas fir).

The timber of the Coniferae is, in general, relatively light, of satisfactory strength in relation to weight, straight-grained, moderately soft and easy to work, machine and nail. In contrast, hardwoods as a group, and particularly the genus *Eucalyptus*, are heavy, strong, hard, not straight-grained and not readily nailed or worked by hand. Certain other properties, especially microscopic cell structure, result in softwoods seasoning much faster and more evenly than hardwoods. Because of these properties softwood sawnwood has a greater range of uses than *Eucalypt* sawnwood. Conifers also produce the bulk of the world's pulpwood although hardwood wood chips and woodpulp are now a significant feature of world trade in forest products.

### Timber resources, production and consumption

Compared with countries of the temperate regions in the northern hemisphere, the indigenous forest resources of Australia are markedly deficient in softwoods.

A Forestry and Timber Bureau estimate of the total volume of softwoods and hardwoods in the forests of Australia is set out below.

#### TIMBER CONTAINED IN AUSTRALIAN FORESTS AS AT 31 MARCH 1970

(Source: Forestry and Timber Bureau)

Type of timber	Volume of timber (Million m <sup>3</sup> true volume under bark)	Percentage of total timber
Hardwoods . . . . .	974.1	92.5
Softwoods . . . . .	79.1	7.5
<b>Total . . . . .</b>	<b>1,053.2</b>	<b>100.0</b>

In contrast to the above, the estimated supply (corresponding approximately to consumption) of sawn timber for the year 1970-71 is set out in the following table.

\* This section, outlining the growth and present extent of Australian softwood plantations, was prepared by the Forestry and Timber Bureau. The part dealing with Commonwealth loans to expand softwood plantations was contributed by the Department of the Treasury.



## ESTIMATED SUPPLY OF SAWN TIMBER, AUSTRALIA, 1970-71

(Source: Forestry and Timber Bureau)

Type of timber	Volume ('000 m <sup>3</sup> )	Percentage of total timber available
Hardwood timber—		
Australian production . . . . .	2,443	
Plus imports . . . . .	302	
Less exports . . . . .	21	
Total supply of hardwood timber . . . . .	2,724	65.45
Coniferous timber—		
Australian production . . . . .	769	
Plus imports . . . . .	673	
Less exports . . . . .	4	
Total supply of coniferous timber . . . . .	1,438	34.55
Total supply of all timber . . . . .	4,162	100.00

The trend of Australian softwood sawn timber production during recent years is given in the following table.

AUSTRALIAN SOFTWOOD SAWN TIMBER PRODUCTION, SELECTED YEARS  
1955-56 TO 1971-72

(Source: Forestry and Timber Bureau)

('000 m<sup>3</sup>)

	Rain forest species	Cypress pine	Plantation grown species	Total softwood
1955-56 . . . . .	91.2	173.9	382.3	647.3
1960-61 . . . . .	71.6	169.1	396.4	637.1
1965-66 . . . . .	53.8	148.1	586.2	788.1
1970-71 . . . . .	34.0	135.9	599.0	768.9
1971-72 . . . . .	36.8	145.8	634.3	816.9

Notable in the above table is the steady decline in the production of softwood species from the virgin rain forests of Queensland and northern New South Wales, and the striking increase in plantation grown timber. The latter is mainly *Pinus radiata*, but already includes a small amount of plantation grown hoop pine.

In the future, rain forest production will probably stabilise at a figure approximating yearly production in 1970, whereas plantation grown timber will increase considerably as a result of the harvesting of increased planting areas established under the Softwood Forestry Agreements Acts of 1967 and 1972 (See page 882 for further reference to these Acts).

## Early plantation, establishment in Australia

The first steps in the creation of government plantations in Australia were taken in 1870, most appropriately, by the State which had the poorest natural resources—South Australia. Planting commenced in 1876, and has continued without interruption ever since, though it was not until shortly before the 1914-18 war that appreciable areas were established each year. These very early plantings here and elsewhere provided valuable evidence in later years as to the suitability of various sites for *Pinus radiata* and other species. The commencement of plantings in South Australia also led to the formation of the Woods and Forests Department of that State, one of the oldest forest services in the British Commonwealth.

Under the aegis of Lands Departments and other State organisations, small plantations were established in other States, notably Victoria, shortly after that time, although it was not until much later that independent forest services were created.

## Commonwealth loans to expand softwood plantations.

Planting was continued at a steady rate between the two World Wars. After the Second World War, planting programs were re-commenced, but at a rate insufficient to provide Australia's future requirements for softwood.

In February 1965 the Australian Forestry Council recommended that the rate of expansion of softwood timber plantings in Australia should be increased from their existing level of about 40,000 acres a year to 75,000 acres a year for the next thirty-five years. The recommendations envisaged a phased increase in the rate of Government plantings by the various State Governments up to a level of some 63,000 acres per annum together with plantings by the Commonwealth in the Territories of 2,000 acres per annum, and an average of at least 10,000 acres per annum by private forest owners. The Council considered that such a program would make a major contribution towards meeting Australia's future requirements for softwood products.

In February 1966 the Commonwealth Government endorsed this recommendation and agreed, as a first step towards achieving the proposed annual target of 75,000 acres, to provide financial assistance to each State, over a five-year period commencing 1 July 1966, to enable them to accelerate their rate of softwood plantings. The assistance, which was provided to the States under section 96 of the Constitution, took the form of long-term loans repayable over twenty-five years with repayments of principal and the payment of interest commencing ten years after the date of each advance. The *Softwood Forestry Agreements Act* 1967 authorised the Commonwealth to enter into agreements with each of the States to provide financial assistance by way of loans during the financial years 1966-67 to 1970-71 inclusive.

In February 1969 the Australian Forestry Council recommended a continuation of Commonwealth financial assistance to the States for softwood timber planting for a further five-year period. The Commonwealth Government agreed in principle to the Australian Forestry Council's recommendations and following negotiations with the States it was agreed that the Commonwealth would assist towards a State planting program of 54,680 acres per annum. The *Softwood Forestry Agreements Act* 1972 authorised the Commonwealth to provide financial assistance to the States, by way of loans, during the financial years 1971-72 to 1975-76 inclusive. These loan funds are to be provided on the same terms and conditions as for the first program.

Payments under the two Acts by the Commonwealth to all States have been as follows: 1966-67, \$291,000; 1967-68, \$3,456,000; 1968-69, \$3,872,000; 1969-70, \$4,814,000; 1970-71, \$4,784,000; 1971-72, \$389,338; 1972-73 (estimated), \$9,100,000; 1973-74 (estimated), \$5,200,000. It is estimated that of the payment of \$9.1 million for 1972-73, \$4.1 million will be made available to cover expenditure incurred in 1971-72.

### Relative demand for softwood and hardwood

Because of the general suitability of softwood for many purposes it seems likely that the future demand for it will trend upwards until it reaches at least sixty per cent of total consumption. It is interesting to note that in South Australia, the only State which has significant home-grown softwood supplies in relation to population, softwoods at present comprise more than eighty per cent of the total sawn timber consumption. The present figure for Australia as a whole is approximately thirty-five per cent.

### Forestry and land utilisation

Many species of the genus *Pinus* can grow satisfactorily on relatively poor sandy soils with a mean annual rainfall which may be less than thirty inches. Under such conditions only the poorer types of eucalypts will grow and the mean annual increment in timber is very low, whereas with the pines it may average 4.67 cubic metres of timber in the ground per acre. Since land of the above type is usually not good enough for agriculture and only of moderate value for pasture, utilisation for softwood plantations may produce the greatest benefit to the nation. The main species of introduced pines now grown in Australia will grow to maturity within forty years, whereas the better types of eucalypts require double that length of time to mature and, unless on exceptionally favourable sites, do not produce as high a mean annual increment of timber.

### Adequacy of timber supplies

Since most of Australia's timber imports consist of softwoods a policy directed towards increasing self-sufficiency in timber supplies has been formulated, thus reducing foreign exchange requirements. The present target based on existing population projections is designed to achieve self-sufficiency by the year 2000. By this time a plantation resource of three million acres will be available, if the annual planting rate recommended by the Australian Forestry Council is maintained. The periodic re-examination of trends in timber usage in the future will enable the program to be modified as necessary to meet any revised targets.

### Extent of existing softwood plantations

The following tables outline the growth of Australian softwood plantations to 31 March 1972.

**AREA OF CONIFEROUS PLANTATIONS, BY TYPE OF PLANTATION,  
31 MARCH 1972**

(Source: Forestry and Timber Bureau)

(Acres net)(a)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Government—									
Exotic conifers—									
Pinus radiata . . .	185,871	114,012	4,883	155,883	30,132	46,767	..	28,773	566,321
Other pinus species . . .	20,159	7,464	104,563	16,478	44,000	198	75	2,235	195,172
Other exotic conifers . . .	3,131	2,552	405	..	..	322	..	369	6,779
Native conifers . . .	3,044	..	80,636	..	..	..	6,524	..	90,204
Total . . .	212,205	124,028	190,487	172,361	74,132	47,287	6,599	31,377	858,476
Private—									
Pinus radiata . . .	25,330	128,528	866	40,549	8,984	19,357	..	..	223,614
Other conifers . . .	17,100	8,976	47,429	18	548	10	50	..	74,131
Total . . .	42,430	137,504	48,295	40,567	9,532	19,367	50	..	297,745
Grand Total . . .	254,635	261,532	238,782	212,928	83,664	66,654	6,649	31,377	1,156,221

(a) Excludes firebreaks and other areas not actually forested.

**AREA OF CONIFEROUS PLANTATIONS, BY TYPE OF PLANTATION, AUSTRALIA  
31 MARCH, 1968 TO 1972**

(Source: Forestry and Timber Bureau)

(Acres Net)(a)

	1968	1969	1970	1971	1972
Government—					
Exotic conifers—					
Pinus radiata . . .	395,215	438,097	483,080	522,304	566,321
Other pinus species . . .	207,176	228,291	248,529	271,435	292,155
Other exotic conifers . . .					
Native conifers . . .	..	..	..	..	..
Total . . .	602,391	666,388	731,609	793,739	858,476
Private—					
Pinus radiata . . .	161,326	187,035	190,986	203,524	223,614
Other conifers . . .	47,224	52,865	55,964	66,211	74,131
Total . . .	208,550	239,900	246,950	269,735	297,745
Grand Total . . .	810,941	906,288	978,559	1,063,474	1,156,221

(a) Excludes firebreaks and other areas not actually forested.

The above table shows the predominance of *Pinus radiata* in all States except Queensland and Western Australia. This species is not climatically adapted to growing in the former State, where the native hoop pine is the most important plantation species, with slash pine (*Pinus elliotii* var. *elliottii*) in second place. The main species in Western Australia is maritime pine (*P. pinaster*), which is particularly adapted to growing on sandy soils too poor for the satisfactory growth of other species.

Private plantations have now assumed a position of importance in the softwood economy. The bulk of them comprise relatively large areas belonging to tree-planting or sawmilling companies, or to larger organisations in the pulp and paper industry. The first phase of extensive private planting was in South Australia and Victoria during the decade 1925–35, and these plantations now form the basis of expanding timber-using industries. The second phase began after the 1939–45 War, when the pulp and paper industry commenced planting on a fairly large scale in order to provide part of the raw material for its future requirements. Investment companies and companies engaged in forest products processing have also contributed to production in the private forestry sector.

**Types of softwood species used in plantations**

*Native species.* Hoop pine—*Araucaria cunninghamii*. Hoop pine is a high quality softwood. Where it occurs naturally in the rain forests, it attains very large dimensions, reaching 150 feet in height and



four feet or more in diameter. To grow hoop pine to this size in plantations would take too long, and a height of 100 feet and diameter of 20 inches is considered satisfactory for utilisation. On good sites this would require a rotation of fifty to sixty years.

All tests to date indicate that the rapid, controlled growth possible in plantations does not affect the quality of the wood in the case of hoop pine; in fact, the wood properties of rapidly grown plantation trees are equal to and sometimes superior to those of average wood from virgin forests. On the evidence available, branch size (with its effect on the knottiness of the timber) appears to be a factor that can be more readily influenced by genetic rather than silvicultural measures. The Forestry Department of Queensland is conducting research on this and other aspects of tree breeding.

The timber of hoop pine is in strong demand for most purposes where durability is not a prime consideration.

Bunya pine—*Araucaria bidwillii*. This species, which is closely related to hoop pine, is planted to only a limited extent on account of its slow growth. It is more heavily-branched and more difficult to establish than hoop pine.

#### *Exotic species*

Radiata pine—*Pinus radiata*. This pine was first introduced into Australia, as well as into New Zealand and South Africa, about a hundred years ago, and has become one of the most important softwood species. It is a native of the Monterey Peninsula in southern California, where it is of negligible importance. When it was introduced to countries overseas it frequently showed a far superior rate of growth and attained much greater dimensions than in its native habitat, with the result that one of its common names is "remarkable pine". Heights at twenty years of age may vary from sixty feet to over a hundred feet, and at maturity attain 130–140 feet. In Australia its planting is mainly restricted to the winter rainfall regions where the summers are dry and warm. Successful plantations have been established in south-eastern South Australia, southern Victoria, Tasmania, on the southern and central tablelands and the south-western foothills of New South Wales, and in the Australian Capital Territory. The mean annual increment of timber per acre varies from about 4.67 to 8.5 cubic metres in the round, true volume. Expressed in terms of a forty-year rotation, an average acre can be expected to produce a total volume of about 283 cubic metres including approximately 259 cubic metres of sawlogs and about 24 cubic metres of pulpwood or small case logs. The timber, like that of most species, needs to be mature, and requires careful milling and seasoning. Under these conditions it is at least equal in quality to red deal (the timber of *Pinus sylvestris*) which is one of the main building timbers of northern Europe.

Slash pine—*Pinus elliottii* var. *elliottii*. This species replaces *Pinus radiata* as the main exotic species in Queensland and in coastal New South Wales north of Newcastle, which are areas of summer rainfall. Slash pine is one of the main timber species of the southern States of the United States of America, and in that country it is used extensively for pulp, sawn timber and veneers. Thinnings from plantations in Queensland have yielded sawn timber of good quality and there is no reason to expect that the quality will be in any way inferior to that of timber in its natural habitat. The rotation will probably be much the same as for *P. radiata*—about forty years. Slash pine was first introduced into Queensland in 1925 and after 1930 began to play an important part in the planting program of the State.

Loblolly pine—*Pinus taeda*. This is another species from the southern and eastern parts of the United States of America, where it grows on a wide variety of soils and under a similar range of climatic conditions to slash pine. It is not generally quite as uniformly healthy and vigorous as slash pine, and for this reason has not been planted as extensively, though, if certain aspects of development can be controlled, it is likely to receive increased attention.

Maritime pine—*Pinus pinaster*. This is the most important exotic pine in Western Australia, where it grows on sandy soils which are too poor for satisfactory development of *P. radiata*. It is also used in similar areas in South Australia. Maritime pine is a native of the Mediterranean region and very large areas of it have been planted for sand dune control in Les Landes region of France.

Maritime pine does not attain a height comparable with *P. radiata*, eighty to ninety feet being common for well-grown mature trees, but diameters are relatively large. The timber is useful for a wide range of purposes.

*Pinus caribaea* var. *hondurensis*. Carribean pine is fast growing and of excellent form. Presently it is being planted in frost-free areas north of Brisbane where it could replace slash pine as the major exotic conifer in coastal areas.

*Callitris intratropica*. This tree is a member of the cypress family. It is one of the few species of tree which is resistant to the termites of the Northern Territory. *Callitris intratropica* is presently being planted at the rate of one thousand acres per year in the Northern Territory.

*Other species*

Interest in the past has been shown in Douglas fir (*Pseudotsuga menziesii*) in high rainfall areas of Victoria and southern New South Wales and limited areas of this species have been established. Canary Island pine (*P. Canariensis*) has been tried under conditions too hot and dry for most other exotic conifers. However, major developments in the future are likely to be in tree improvement within the major species rather than the introduction of new species or artificial hybrids.

The first seed orchard in Australia was planted in Queensland in 1953. The Australian forest services now have 1,200 acres of seed orchards available to them. Through controlled breeding programs, tree improvement can be made with respect to form, disease and drought resistance. Australia can expect to be self-sufficient in seed requirements for all major species by 1980.

### Forest administration and research

*Commonwealth Forestry and Timber Bureau.* The functions of the Commonwealth Forestry and Timber Bureau are laid down in the *Forestry and Timber Bureau Act 1930-1953* and include forestry research and education, the study of timber supply, and advice to the Government on forestry matters. The administering department is the Department of Primary Industry.

In 1961 the Commonwealth Government expanded its activities in forestry research in Australia. The existing Forestry and Timber Bureau Divisions of Silvicultural Research and Forest Management Research were combined to form the Forest Research Institute as a separate branch of the Bureau. The purpose of the Institute is to provide complete coverage in forestry research, ensuring that all problems of primary importance to the practice and development of forestry in Australia are investigated. In developing a program with this objective, the Institute takes account of the research activities and potential of the State forest services and other organisations. The research work carried out by the existing sections of the Forest Research Institute covers a wide range of studies, including the following: factors affecting tree growth, tree breeding, introduction of exotic species, forest nutrition, forest botany, forest entomology and pathology, fire protection, watershed management, forest mensuration, forest management and management economics, aerial inventory, biometrics, and tree seed. The Forest Research Institute maintains six regional establishments in the Commonwealth, two of which have an outstation in addition to the regional headquarters. These research stations are run on a co-operative basis with State forest services and private forest companies or other government instrumentalities.

The Forestry and Timber Bureau also maintains a Forest Resources Development Branch concerned with the compilation and analysis of statistics of production, consumption and trade in timber and other forest products. This Branch also carries out studies in forest economics and research into logging methods and machines. Advice on timber supply matters is currently made available to government departments and private enterprise. Research is also undertaken on matters associated with the marketing of timber products.

*Commonwealth Scientific and Industrial Research Organization.* The Divisions of Building Research and Applied Chemistry carry out a wide range of investigations relating to the properties of wood and the uses of wood and wood products. These activities were formerly carried out by the Division of Forest Products which, in May 1971, ceased to be a separate entity within C.S.I.R.O. following a reorganisation of C.S.I.R.O. research effort in the field of forest products. That part of the Division of Forest Products concerned with wood as a structural material was integrated with the Division of Building Research, and the remaining part, which was concerned with research for the paper and pulp industry, was integrated with the Division of Applied Chemistry. Most of the present forest products activities of both Divisions are conducted at premises in South Melbourne now known as the C.S.I.R.O. Forest Products Laboratory.

At the Forest Products Laboratory research work administered by the Division of Building Research is carried out by six separate Sections: Timber Physics, Timber Structures, Timber Engineering Science, Forest Conversion Engineering and Forest Conversion Science. In addition, the Division provides assistance to individuals and industry, administers courses of instruction on timber properties and usage, and maintains co-operative projects with overseas authorities operating in the same fields. The research sections working at the Laboratory as units of the Division of Applied Chemistry are Paper Science, and Wood and Forest Science.

*Forestry in the Territories.* Forestry activities in Papua New Guinea are controlled by the Administration through its Department of Forests. The management of forests in the Australian Capital Territory is the responsibility of the Forestry Branch of the Department of the Capital Territory.

The Forestry and Timber Bureau advises the Administrations of the Australian External Territories on the management of the forests in those Territories. Forests in the Northern Territory are under the control of the Forestry Branch of the Department of the Northern Territory.

*Forestry activities of the States.* Forestry on State-owned lands in the various States is the responsibility of the respective State Governments, but they do not exercise any control over forestry activities on private property. The powers and functions of State forest authorities are laid down under forest Acts and Regulations. In each State there is a department or commission to control and manage State forests. Its functions include the introduction of proper measures for the control and management of forest land; the protection of forest land; the conversion, marketing and economic utilisation of forest products; the securing of an adequate and permanent reservation of State forests; and the establishment and maintenance of coniferous forests to remedy the existing deficiency of conifers in Australia. All State forest services are actively engaged on research programs. Annual reports are issued by each State forest authority.

In addition to developing permanent forest reserves in each State, foresters are surveying all forested Crown lands with a view to obtaining dedications of new State forests to add to the permanent forest estate or to release for other uses areas unsuitable for forestry. State forest authorities control over 15 million acres of timber reserves, national parks, etc. They also usually control all timber on unoccupied Crown lands.

*Private forestry.* Privately owned lands contribute considerably to the total production from Australian forests. The most important areas of managed native forest in private ownership are the forests owned by pulp and paper companies. Schemes of financial assistance to individual land owners—designed primarily to encourage establishment and management of coniferous plantations—have been introduced by the Governments of New South Wales and Victoria.

The area of privately owned coniferous plantations is rapidly increasing, and here again the pulp and paper companies are very active. In step with the increase in afforestation programs, the number of professional foresters employed in private forestry enterprise is increasing, while several are engaged on research.

The area of coniferous plantations established by private companies and individuals is included in the table on page 883.

### **Forestry education**

The functions of the Australian Forestry School at Canberra, previously a division of the Forestry and Timber Bureau, were taken over by the Australian National University at the beginning of the 1965 academic year. The school was absorbed into the University's School of General Studies as the Department of Forestry. This Department provides a full four-year training leading to the degree of B.Sc. in forestry. The University of Melbourne also maintains a School of Forestry which gives training leading to a B.Sc. degree in forestry. The Universities in all States provide facilities for post-graduate studies leading to higher degrees for forestry graduates.

The Victorian Forests Commission maintains a Forestry School at Creswick where recruits are trained, mainly for employment in the Commission.

### **The Australian Forestry Council**

The Australian Forestry Council comprises the Ministers responsible for forestry in the six State Governments and the Commonwealth Government.

The Council is intended to provide the means for the mutual exchange between the State and Commonwealth Governments of information and views on forestry. It co-ordinates research into problems affecting the establishment, development, management, and fire protection of all forests, and the utilisation of forest products. It assists in co-ordinating the work of State and Commonwealth Governments and also private enterprise in the development of Australian forestry.

The Council is supported by a Standing Committee, consisting of the Director-General of the Forestry and Timber Bureau, the heads of each of the six State Forest Services, the Chief of the Division of Building Research, C.S.I.R.O., and the secretaries of the Commonwealth Departments responsible for forestry.

### **Fire protection**

The provision of adequate fire protection is one of the main problems facing forest and rural authorities. Government and private forestry organisations are responsible for the protection of about 47 million acres of forest land, of which a relatively accessible area of 23 million acres is



given a high degree of protection, about 17 million acres in the more inaccessible areas receive a lesser degree of protection, and about 7 million acres are at present not protected. Other extensive forest areas consisting mainly of vacant Crown land, but including land under private ownership or leasehold, are either not protected or are given some degree of fire protection by rural fire-fighting organisations or Government-financed fire protection associations.

During the 1971-72 fire season a total of 1,195 fires were recorded over the area of 40 million acres of forest land afforded either intensive or extensive protection by forest authorities. The area burnt by these fires totalled 457,280 acres or 1.1 per cent of the area protected.

The number of fires and the area of native forest burnt during the last ten years is shown in the following table.

#### NUMBER OF FIRES AND FOREST AREA BURNT, 1962-63 TO 1971-72

(Source: Forestry and Timber Bureau)

Year	Protected forest areas(a)		
	Number of fires	Forest area burnt	Percentage of forest area burnt
		'000 acres	
1962-63	1,299	275	0.7
1963-64	1,494	549	1.5
1964-65	2,307	1,626	4.1
1965-66	1,865	465	1.2
1966-67	1,422	388	1.0
1967-68	1,754	754	1.9
1968-69	2,165	1,885	4.7
1969-70	905	130	0.3
1970-71	1,018	176	0.4
1971-72	1,195	457	1.1

(a) The area receiving protection has been taken as the 40 million acres for which State forest services provide protection.

Very intensive fire protection is afforded to the coniferous plantation area of Australia. This area is increasing rapidly and the annual planting program is now between 60,000 and 70,000 acres. During the 1971-72 fire season a total of 313 acres was burnt, representing 0.03 per cent of the area of 1,059,000 acres for which fire statistics are available.

The area of coniferous plantations burnt during the past ten years is shown in the following table.

#### CONIFEROUS PLANTATIONS AREA BURNT AND TOTAL AREA, 1962-63 TO 1971-72

(Source: Forestry and Timber Bureau)

Year	Number of fires	Area burnt	Area of coniferous plantations(a)	Percentage of coniferous area burnt
		acres	acres	
1962-63	n.a.	475	492,000	0.10
1963-64		418	515,000	0.08
1964-65		3,130	556,000	0.56
1965-66		1,520	610,000	0.25
1966-67		461	660,835	0.07
1967-68	39	288	729,928	0.04
1968-69		2,247	781,000	0.29
1969-70		149	874,000	0.02
1970-71		1,404	993,000	0.14
1971-72		313	1,059,000	0.03

(a) This area does not include certain privately owned coniferous plantations for which fire statistics are not available. In 1969-70 the area for which no statistics were available was 105,000 acres; in 1970-71, 30,000 acres; and in 1971-72, 97,000 acres.

Detailed information on fire protection is given in Year Book No. 55, 1969, pages 966-7.

### Employment in forestry

In the following table details are shown of the number of persons employed by State forestry departments, the Department of the Northern Territory, the Forestry and Timber Bureau in the relevant States and Territories, and the private sector of the forestry industry at 30 June 1972. The table excludes staff of forestry training establishments.

#### PERSONS EMPLOYED IN FORESTRY, STATES AND TERRITORIES, 30 JUNE 1972

(Source: Forestry and Timber Bureau)

Occupational group	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Professional staff—									
Foresters . . . .	230	260	100	57	56	96	18	52	869
Others . . . . .	85	32	98	36	13	19	..	11	294
Field and other technical staff	305	348	115	42	252	235	50	43	1,390
Clerical staff . . . .	295	324	249	137	68	131	18	63	1,285
Labour(a) . . . . .	1,360	1,310	1,760	295	899	676	75	94	6,469
Extraction(b) . . . .	3,600	1,095	2,600	244	846	2,656	8	41	11,090
<b>Total . . . . .</b>	<b>5,875</b>	<b>3,369</b>	<b>4,922</b>	<b>811</b>	<b>2,134</b>	<b>3,813</b>	<b>169</b>	<b>304</b>	<b>21,397</b>

(a) Staff engaged in silvicultural forest works, etc. only.

(b) Staff engaged in felling, carting, etc. Includes direct employees only.

### Log sawmilling and veneer and plywood, etc., manufacturing activities

Selected details of the operations of establishments engaged in log sawmilling and the manufacture of plywood, etc., are set out in the tables below. These details were compiled from the annual censuses of Manufacturing for 1969-70 and 1971-72. For further details of the Manufacturing Census see Chapter 21, Manufacturing Industry. An annual Manufacturing Census was not conducted in respect of the year ended 30 June 1971.

#### MANUFACTURING ESTABLISHMENTS—LOG SAWMILLING (A.S.I.C. CLASS 2511)(a)

##### SUMMARY OF OPERATIONS, 1969-70 AND 1971-72

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1969-70									
Establishments in operation at 30 June . . . .	No. 432	270	304	42	116	183	..	3	1,350
Employment(b) . . . .	5,080	3,224	3,409	(c)	2,383	1,575	..	(c)	16,442
Turnover . . . . .	\$'000 55,690	35,024	32,400	(c)	23,871	13,481	..	(c)	172,244
Value added . . . . .	31,151	20,524	18,319	(c)	15,907	7,146	..	(c)	98,806
Fixed capital expenditure (outlay on fixed tangible assets less disposals) .	1,979	1,441	1,137	(c)	526	523	..	(c)	5,688
1971-72									
Establishments in operation at 30 June . . . .	No. 424	257	300	40	102	172	..	5	1,300
Employment(b) . . . .	4,960	3,222	3,163	616	2,132	1,581	..	51	15,725
Turnover . . . . .	\$'000 63,225	39,370	34,935	12,151	20,657	17,679	..	516	188,534
Value added . . . . .	37,584	23,113	21,845	4,282	14,908	8,521	..	256	110,510
Fixed capital expenditure (outlay on fixed tangible assets less disposals) .	2,968	1,138	1,644	125	344	543	..	3,020	9,783

(a) Australian Standard Industrial Classification. See page 730.

(b) Average over whole year; includes working proprietors.

(c) Not available for publication.

**MANUFACTURING ESTABLISHMENTS—PLYWOOD, VENEER AND MANUFACTURED BOARDS OF WOOD (ASIC CLASS 2513)(a): SUMMARY OF OPERATIONS, 1969-70 AND 1971-72**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1969-70									
Establishments in operation at 30 June . . . . .	No. 38	12	25	7	4	3	..	..	89
Employment(b) . . . . .	2,807	721	2,361	547	(c)	(c)	..	..	7,339
Turnover . . . . .	\$'000 35,129	11,825	27,936	9,166	(c)	(c)	..	..	98,590
Value added . . . . .	16,609	5,058	11,086	4,912	(c)	(c)	..	..	43,787
Fixed capital expenditure (outlay on fixed tangible assets less disposals) . . . . .	998	687	926	506	(c)	(c)	..	..	3,345
1971-72									
Establishments in operation at 30 June . . . . .	No. 37	12	30	7	3	3	..	..	92
Employment(b) . . . . .	2,775	772	2,474	647	(c)	(c)	..	..	7,498
Turnover . . . . .	\$'000 39,970	14,499	31,394	11,167	(c)	(c)	..	..	112,997
Value added . . . . .	19,007	6,573	15,124	5,264	(c)	(c)	..	..	52,699
Fixed capital expenditure (outlay on fixed tangible assets less disposals) . . . . .	1,877	565	607	3,316	(c)	(c)	..	..	6,686

(a) Australian Standard Industrial Classification. See page 730.  
 proprietors. (c) Not available for publication.

(b) Average over whole year; includes working proprietors.

**Forest production**
**FOREST PRODUCTION(a): STATES AND TERRITORIES, 1971-72**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Production of logs for sawing, peeling, slicing or pulping—</b>									
Broadleaved—									
Eucalypt and related species . . . . .	'000 m <sup>3</sup> 1,491	2,168	514	16	1,111	2,185	1	..	7,486
Rain forest species . . . . .	128	..	242	..	..	..	..	..	370
Coniferous—									
Indigenous forest 'pines'—									
Cypress . . . . .	140	..	191	..	..	..	2	..	333
Other . . . . .	..	..	67	..	..	4	..	..	71
Plantation grown 'pines' . . . . .	216	574	155	890	92	57	..	61	2,045
Total . . . . .	1,976	2,742	1,169	906	1,203	2,246	3	61	10,305
<b>Gross value of forest products(b)—</b>									
Logs(c) . . . . .	\$'000 24,012	34,864	15,884	8,826	7,810	18,858	33	640	110,927
Hewn and other timber (incl. firewood)(d) . . . . .	17,034	4,709	4,519	3,037	(e)6,180	3,069	15	24(f)38,587	
Other forest products(g) . . . . .	576	125	741	72	(h)5	..	..	3	(i)1,522
Total . . . . .	41,622	39,698	21,143	11,935(j)14,660	21,927	47	667	151,699	
<b>Local value of forest products(k) . . . . .</b>									
Total . . . . .	40,781	39,304	15,147	11,905	13,288	18,193	47	667	139,332

(a) Excludes some production from private land thought to be relatively small, details of which are not available.  
 (b) Gross production valued at principal markets. See the chapter Miscellaneous for a more detailed reference to the value of production of forestry, as well as a brief explanation of the terms used. (c) See footnote (c) to the table Forest Production: Australia, 1967-68 to 1971-72, below. (d) Includes also sleepers, transoms, girders, bridge timbers, mining timber, poles, piles, etc. (e) Excludes value of timber used for tannin extract, which is not available for publication. (f) Incomplete; see footnote (e). (g) Includes charcoal (forest production only), tanning bark, essential oils, eucalyptus leaves, crude rutin, etc. (h) Excludes value of sandalwood and substitutes, which is not available for publication. (i) Incomplete; see footnote (h). (j) Includes value of timber used for tannin extract and sandalwood and substitutes. (k) Gross production valued at place of production; see footnote (b).



## FOREST PRODUCTION(a): AUSTRALIA, 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Production of logs for sawing, peeling, slicing or pulping—</b>					
Broadleaved—					
Eucalypt and related species . . . '000 m <sup>3</sup>	7,185	7,213	7,234	7,220	7,486
Rain forest species . . . „	361	376	378	363	370
Coniferous—					
Indigenous forest 'pines'—					
Cypress . . . „	345	322	344	330	333
Other . . . „	98	105	92	66	71
Plantation grown 'pines' . . . „	1,674	1,860	2,048	2,143	2,045
<i>Total</i> . . . „	9,664	9,875	10,095	10,121	10,305
<b>Gross value of forest products(b)—</b>					
Logs . . . \$'000	89,552	(c)90,340	(c)96,607	(c)104,363	(c)110,927
Hewn and other timber (including firewood)(d)(e) . . . „	27,702	(f)28,070	(f)29,623	(f)33,692	38,587
Other forest products(g)(h) . . . „	851	(i)774	(i)843	(i)1,079	1,522
<i>Total(j)</i> . . . „	118,769	119,717	127,669	139,955	151,699
<b>Local value of forest products(k)—</b>					
<i>Total</i> . . . „	109,759	110,344	117,797	128,960	139,332

(a) Excludes some production from private land, thought to be relatively small, details of which are not available.  
 (b) See footnote (b) to the table Forest Production: States and Territories, 1971-72 above. (c) Included in this category are amounts attributable to sawmillers who carry out their own logging activities as a secondary part of their operations. As such, the values are attributable to the sawmilling industry which is part of manufacturing industry. However, the amount has been included in this table so that the overall value of forest products might be shown. The amount in question is estimated to be \$26.1 million for 1968-69, or 28.9 per cent of the Australian total of \$90.3 million; and \$29.5 million in 1969-70, or 30.5 per cent of the total of \$96.6 million. An estimate of the amount for subsequent years is not available.  
 (d) Includes also sleepers, transoms, girders, bridge timbers, mining timber, poles, piles, etc. (e) Excludes value of timber used for tannin extract in Western Australia, which is not available for publication. (f) Includes value of 'Other forest products' for Tasmania. (g) Includes charcoal (forest production only), tanning bark, essential oils, eucalyptus leaves, crude rutin, etc. (h) Excludes value of sandalwood and substitutes in Western Australia, which is not available for publication. (i) Incomplete; figure for Tasmania included in value of 'Hewn and other timber'. (j) Includes value of timber used for tanning extract and sandalwood and substitutes in Western Australia. (k) Gross production valued at place of production. See footnote (b) to the above table.

## Timber and timber products

## Mill production of timber

Particulars of logs treated and the production of sawn, peeled and sliced timber by sawmills and other woodworking establishments are shown in the following table. The figures prior to 1968-69 have been compiled from annual factory collections, which cover virtually all sawmills. The only omissions are some small portable mills operated by itinerants, e.g. sleeper cutters. Figures for 1968-69 and 1969-70 are not strictly comparable with previous years because of changes in the census units and scope.

OUTPUT OF AUSTRALIAN-GROWN TIMBER: ALL MILLS  
STATES AND TERRITORIES, 1969-70(a)

('000 super ft)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.(a)
Sawn, peeled or sliced timber produced from logs—								
Broadleaved . . .	362,604	273,161	145,556	4,378	180,645	165,857	..	1,132,200
Coniferous . . .	77,707	40,425	65,509	106,549	7,920	4,576	(b)	302,687
<i>Total timber produced</i> .	440,311	313,585	211,065	110,927	188,566	170,433	(b)	1,434,887

(a) Nil production was recorded in the Northern Territory.

(b) Included in figure for New South Wales.

**OUTPUT OF AUSTRALIAN-GROWN TIMBER, ALL MILLS: AUSTRALIA(a)**  
**1965-66 TO 1969-70**  
('000 super ft)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>Logs treated—</b>					
Broadleaved(b) . . . . .	2,371,263	2,313,256	2,341,895	2,260,762	2,249,016
Coniferous(b) . . . . .	569,521	554,838	532,965	545,779	552,531
<b>Total logs treated(b) . . . . .</b>	<b>2,940,784</b>	<b>2,868,093</b>	<b>2,874,860</b>	<b>2,806,541</b>	<b>2,801,547</b>
<b>Sawn, peeled or sliced timber produced from logs above—</b>					
Broadleaved . . . . .	1,178,473	1,143,814	1,165,376	1,113,679	1,132,200
Coniferous . . . . .	329,532	317,591	307,684	295,594	302,687
<b>Total timber produced . . . . .</b>	<b>1,508,005</b>	<b>1,461,405</b>	<b>1,473,059</b>	<b>1,409,273</b>	<b>1,434,887</b>

(a) Excludes Australian Capital Territory and Northern Territory for years prior to 1968-69. (b) Gross hoppus basis: not necessarily comparable with details for years prior to 1965-66, which are generally on a true volume basis. Gross hoppus measure is approximately 78.5 per cent of the true volume.

In addition to the mill production of timber shown in the preceding tables, a large quantity of hewn and round timber, e.g. sleepers, piles, poles, fencing timber, timber used in mining and fuel, is obtained directly from forest and other areas. Information in respect of the value of this output may be found in the tables dealing with forest production on pages 889-90.

**Veneers, plywood, etc.**

Cutting of timber for the manufacture of veneers, plywood, etc., has been carried out in most States for a number of years. In recent years this has been considerably extended, since plywood manufacture has allowed the use of some species unsuitable for sawing. Special attention has been paid to ensure that logs suitable for peeling are diverted to ply factories.

**PLYWOOD PRODUCED: AUSTRALIA, 1965-66 TO 1969-70**  
('000 square feet:  $\frac{3}{16}$ -in. basis)

State	1965-66(a)	1966-67(a)	1967-68(a)	1968-69(b)	1969-70(b)
New South Wales . . . . .	(c)	58,791	64,903	71,083	79,249
Queensland . . . . .	(c)	(c)	(c)	85,396	100,402
Other States . . . . .	52,296	(c)	(c)	76,448	80,059
<b>Australia . . . . .</b>	<b>187,258</b>	<b>200,451</b>	<b>230,018</b>	<b>232,927</b>	<b>259,711</b>

(a) Excludes Australian Capital Territory and Northern Territory. (b) Includes Australian Capital Territory and Northern Territory. (c) Not available for publication.

Of the total plywood produced in 1969-70, 134,066,000 square feet ( $\frac{3}{16}$ -in. basis) were classed as 'Commercial', 96,555,000 as 'Waterproof', 6,821,000 as 'Case', and 22,269,038 as 'Sliced fancy'.

During 1969-70, 789.8 million square feet ( $\frac{1}{16}$ -in. basis) of veneers were produced by the rotary process for the manufacture of plywood. In addition, 71.9 million square feet of sliced veneers were produced.

### Manufactured boards

Particle board, resin or cement bonded of acoustic and other composition, amounted to 156,825,000 square feet during 1969-70.

### Woodchips

Woodchips are manufactured from sawmill waste and other timber otherwise of little or no commercial value. Their primary use is the production of wood pulp. The recently established woodchip industry in Australia at present produces only for export to Japan, although there are long-term plans for the Australian production and export of wood pulp made from woodchips.

There are four companies, three in Tasmania and one in New South Wales, which operate chipping mills and which have entered into agreements to export woodchips to Japanese pulp mills. The contract covering the export of woodchips from New South Wales, spanning a 20 year period, allows for an annual export of 610,000 tonnes of chips; the total quantity under contract being 3.4 million tonnes. Exports from Tasmania are covered by four contracts, ranging in length from 5½ to 15 years, and involving a total quantity of 22.2 million tonnes. The Tasmanian contracts involve annual shipments ranging from 310,000 to 710,000 tonnes. It is expected that by 1988, these four projects will export a total of 30 million tonnes of woodchips to Japan valued at about \$460 million. All four companies had commenced exports by 1972. Supplies of timber for chipping will come from State and privately owned forest lands, and from sawmill residues.

In addition to the above projects, a 15 year contract has recently been concluded between a Western Australian company and Japanese paper makers for the supply of up to 760,000 tonnes of woodchips per annum, valued in total at about \$200 million, from Western Australia.

### Wood pulp and paper

*Wood pulp.* During 1969-70 wood pulp production was 464,992 tons of chemical, mechanical and other pulp. During the previous year production was 403,907 tons.

Detailed information relating to the types and methods of production of wood pulp in the various States was published in Year Book No. 50, 1964, page 1110.

*Paper and paper board.* Paper and paper board are manufactured in all States but the greater part of the industry is in New South Wales, Victoria and Tasmania. A wide variety of paper and paper board is produced in Australian mills. The table below gives details of the production of some of the principal items.

#### PRODUCTION OF PAPER PRODUCTS: AUSTRALIA, 1968-69 TO 1971-72

(tons)

Type of paper	1968-69	1969-70	1970-71	1971-72
Newsprint . . . . .	123,935	170,576	175,860	178,610
Blotting . . . . .	521	488	492	427
Duplicating . . . . .	10,898	9,564	12,199	14,336
Printing and writing . . . . .	121,013	123,248	126,807	127,841
Wrapping—				
Kraft . . . . .	231,458	269,719	267,923	278,938
Other . . . . .				
Paper felts . . . . .	1,366	1,476	1,544	961
Paper boards . . . . .	342,406	370,677	379,142	375,974



## Overseas trade in forest products, timber and timber products

## Imports

IMPORTS OF FOREST PRODUCTS, TIMBER AND TIMBER PRODUCTS  
AUSTRALIA, 1969-70 TO 1971-72

	Quantity			Value (\$'000 f.o.b.)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Crude wood, timber and cork—						
Wood waste and charcoal . . . . .				18	16	23
Wood in the rough or roughly squared . . . '000 m <sup>3</sup>	129	107	97	3,671	3,165	2,806
Wood shaped or simply worked—						
Timber, sawn lengthwise, sliced or peeled, but not further prepared, of a thickness exceeding 5 mm—						
Conifer—						
Douglas fir . . . . .	390	416	416	21,479	19,970	20,462
Hemlock and balsam . . . . .	47	59	72	1,791	2,040	2,636
Radiata pine . . . . .	67	70	51	2,214	2,423	1,858
Redwood . . . . .	5	5	4	487	510	328
Western red cedar . . . . .	75	66	71	5,963	4,963	4,958
Other . . . . .	37	45	45	2,609	(a)3,405	3,304
Total conifer . . . . .	621	661	659	34,543	(a)33,310	33,546
Non-conifer(b) . . . . .	245	243	216	13,089	13,964	12,154
Timber (including blocks, strips, etc.), planed, tongued, grooved, rebated, etc., but not further manufactured—						
Conifer . . . . .	11	13	12	844	1,050	1,087
Non-conifer . . . . .	7	10	19	618	862	1,678
Cork, raw and waste . . . . .	..	..	..	295	426	503
Selected items of forest origin, other than crude wood, timber and cork—						
Tanning extracts of vegetable origin . . tonnes	3,227	2,887	2,752	570	543	544
Wood and cork manufactures (except furniture)—						
Veneers, plywoods, 'improved' or reconstituted wood and other wood, worked, n.e.s.(c) . . '000 sq ft	192,753	206,090	220,906	9,024	10,333	10,246
Wood manufactures n.e.s. (household utensils, domestic utensils, building carpentry, etc.) . . .	..	..	..	4,967	5,274	5,852
Cork manufactures . . . . .	..	..	..	1,399	1,666	1,721

(a) Includes a value of \$38,000 for which no quantity has been included. (b) Total values for this item for 1969-70, 1970-71 and 1971-72 include values of \$33,000, \$94,000, and \$184,000 respectively, for which no quantities have been included. (c) Total values for this item for 1969-70, 1970-71 and 1971-72 include values of \$699,000, \$795,000, and \$1,040,000 respectively, for which no quantities have been included.

## Exports

EXPORTS OF AUSTRALIAN FOREST PRODUCTS, TIMBER AND TIMBER PRODUCTS(a)  
AUSTRALIA, 1969-70 TO 1971-72

	Quantity			Value (\$'000 f.o.b.)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Crude wood, timber and cork—						
Wood waste and charcoal (including shell and nut charcoal)	'000 m <sup>3</sup>			23	13	3
Wood in the rough or roughly squared	"	7,594	14,272	476	612	358
Wood, shaped or simply worked—						
Railway sleepers	"	19,383	20,962	1,279	1,541	2,683
Timber, sawn lengthwise, sliced or peeled, but not further prepared, of a thickness exceeding 5 mm—						
Conifer	"	399	1,456	46	136	120
Non-conifer—Jarrah	"	13,384	4,988	940	363	503
Other	"	15,447	15,032	1,248	1,258	1,510
Timber (including blocks, strips, and friezes for parquet or wood block flooring, not assembled), planed, tongued, etc.—						
Conifer	"	1,326	1,895	130	211	205
Non-conifer	"	1,069	342	121	47	198
Cork, raw and waste	tonnes	2	..	1	..	2
Selected items of forest origin other than crude wood, timber and cork—						
Natural gums, resins, gum-resins, balsam and lacs						
Eucalyptus oil	"	398	367	61	51	68
Wood and cork manufactures (except furniture)—						
Veneers, plywood boards, etc.—						
Wood sawn lengthwise, sliced or peeled, not further prepared, veneer sheets and sheets for plywood, of a thickness not exceeding 5 mm	'000 sq ft	9,228	7,156	383	303	244
Plywood, blockboard, laminated wood products, inlaid wood and marquetry, cellular wood panels—						
Plywood	"	2,090	2,181	400	533	487
Other	"	633	1,548	57	107	145
Reconstituted wood, in panels, sheets or strips	"	1,844	2,358	311	351	(b)308
Wooden beadings and mouldings	"	..	..	143	103	59
Improved wood, and wood simply shaped or worked, n.e.s.	"	..	..	12	30	18
Wood manufactures n.e.s., and plants and parts of plants used in dyeing and tanning	"	..	..	622	1,122	1,117
Cork manufactures n.e.s.	"	..	..	118	159	265

(a) Excludes re-exports.

(b) Includes a value of \$3,000 for which no quantity has been included.

## CHAPTER 25

### FISHERIES

Further information on subjects dealt with in this chapter is contained in the annual mimeographed statistical bulletins *Fisheries* (10.8 and 10.9), particularly as regards types of fish, etc. caught.

#### Fisheries resources and their commercial exploitation

##### Fish

Approximately 2,000 species of marine and freshwater fish occur in and around Australia, about forty of which support substantial commercial fisheries. Most fishing is confined to waters over the continental shelf on the populous eastern and south-eastern seaboard, including Tasmania and South Australia, and off the south-western corner of the continent. As in other countries, fisheries in Australia may be divided into estuarine fisheries, located in the tidal waters of rivers and coastal lakes, beaches and bays; pelagic fisheries, which exploit species inhabiting the surface layers of the open ocean; and demersal fisheries, which fish the bottom layers of the sea. Estuarine fisheries produce considerable quantities of mullet (mainly *Mugil cephalus*), bream (*Acanthopagrus spp.*) and, in northern Australia, the valuable giant perch (*Lates calcarifer*). Important freshwater fisheries in New South Wales, Victoria and South Australia include those for Murray cod (*Maccullochella macquariensis*), golden perch (*Plectroplites ambiguus*) and eels (*Anguilla australis*). Rainbow trout are farmed in Tasmania. Important pelagic fisheries include those for Australian 'salmon' (*Arripis trutta*), southern bluefin tuna (*Thunnus maccoyii*), snoek (*Leionura atun*), mackerel (*Cybiium spp.*) and clupeoids (*Sardinops neopilchardus* and *Engraulis australis*). Demersal fisheries include those for snapper (*Chrysophrys auratus*), whiting (*Sillaginidae*) and from tropical waters the so called 'cods' (*Epinephelus*, etc.). Trawl fisheries off New South Wales and Victoria yield species such as flathead (*Neoplatycephalus* and *Trudis spp.*), morwong (*Nemadactylus spp.*) and John Dory (*Zeus faber*). The previously valuable fishery for edible school and gummy shark (*Galeorhinus australis* and *Mustelus antarcticus*) in south-eastern Australia has declined significantly in the year 1972-73 because of the discovery of a high mercury content in large school shark. A fishery for clupeoids in the Bass Strait which supplies the raw material for a fish meal plant at Lakes Entrance, Victoria, is the only 'industrial fishery' in Australia, but several exploratory purse seine ventures aimed at production of clupeoids have been established in south-eastern Australia recently.

##### Crustaceans

The western and southern rock lobsters (*Panulirus longipes cygnus* and *Jasus novaehollandiae*) which are taken on rocky reefs around the southern half of Australia, provide the most valuable fishery in Australia. Prawns (*Penaeus* and *Metapenaeus spp.*) are taken in estuarine, coastal and offshore waters of all States except Tasmania. This fishery has grown rapidly in recent years, especially in northern Australia. Bay lobsters (*Thenus spp.*) are taken incidentally to prawn trawling operations. Crabs (*Scylla* and *Portunus spp.*) are taken mainly in Queensland, New South Wales and Western Australia.

##### Molluscs (edible)

Naturally occurring oysters are harvested in all States; and in New South Wales and Queensland the Sydney rock oyster (*Crassostrea commercialis*) is cultured commercially. There is limited culture of the introduced Pacific oyster (*Crassostrea gigas*) in Tasmania and, recently, South Australia. Following a serious decline in catches in the scallop (*Pecten meriaionalis*) fishery based on stocks in Port Phillip Bay, Victoria, new offshore beds were located in southern New South Wales, eastern Victoria and south-western Western Australia. However, substantial fluctuations in abundance has resulted in erratic variation in production from year to year. A fishery based on the saucer scallop (*Amusium balloti*) developed, then declined, in another area of Western Australia, and there is a similar though more stable fishery in Queensland. An important abalone fishery has been developed since 1964 in south-east Australia with Tasmania, Victoria and South Australia providing the bulk of the catch. Mussels (*Mytilus planulatus*) are harvested in Victoria, and a fishery for squid has developed in the Derwent River estuary at Hobart in 1972-73. Other small quantities of cephalopods, mainly squid, are produced in many localities.



### Pearl-shell and trochus-shell

The shell of the Australian species of pearl oyster (*Pinctada maxima*) is taken from various localities in the tropical waters of Australia from Broome in Western Australia to Cairns in Queensland for the manufacture of buttons, knife handles, etc. Live pearl-shell is used for pearl culture, *Pinctada maxima* being capable of producing pearls which are the largest in the world and which command top market prices. Trochus-shell is found mainly on coral reefs off the Queensland coast, although small quantities occur in Western Australia.

### Whales

The Australian whaling industry formerly exploited the baleen (humpback) whales during their winter migrations along the east and west coasts of Australia. However, owing to the total prohibition placed on their capture by the International Whaling Commission in 1963, Australian whaling is now confined to the sperm whale (*Physeter catodon*) which has been taken in the southern waters of Western Australia since 1955. Processing operations were carried out by several shore stations, but now only one station at Albany, Western Australia, is still operating.

### Marine flora

The only substantial commercial collection of seaweed in Australia is undertaken at Triabunna, Tasmania, where a factory is processing seaweed (*Macrocystis pyrifera*) for its alginate content.

### General

A map showing Australia's principal ports and generalised localities of the fishery resources under exploitation appears on plate 49, page 898. Detailed information on the history of the development of fisheries industries in Australia is given in Year Book No. 55, pages 976-7.

## Fisheries administration and research

The Constitution of the Commonwealth (Section 51 (x)) assigns to the Commonwealth power to legislate for fisheries in Australian waters beyond territorial limits, the residual power in respect of waters within territorial limits (including inland waters) resting with the States. The Commonwealth has made similar arrangements for each of its Territories. Each State and Territory has legislation regulating fisheries in waters within its jurisdiction. Persons taking fish for sale, and their boats, are required to be licensed, and provision is made for management of the fisheries.

The Commonwealth laws regulating the fisheries are the *Fisheries Act* 1952-1970, the *Continental Shelf (Living Natural Resources) Act* 1968 and the *Whaling Act* 1960-1966. Each of these applies in accordance with the Commonwealth's fishery power under the Constitution.

### Fisheries Act

This Act requires persons engaging in fishing and boats used for fishing to be licensed and their equipment for taking fish to be registered if the purpose of the fishing is commercial. It also provides for management and conservation of the fisheries. The Act applies to Australian residents and their boats in waters proclaimed under the Act and, since 1968, to foreign boats and their crews in the zone of waters extending 12 miles from the baselines of the territorial sea but excluding waters within territorial limits, where State law applies.

### Continental Shelf (Living Natural Resources) Act

This Act implements in Australian law the sovereign rights, conferred on Australia in respect of the organisms belonging to sedentary species (that is, organisms which, at the harvestable stage, either are immobile on or under the seabed, or are unable to move except in constant physical contact with the seabed or the subsoil) on the continental shelf. The continental shelf comprises the seabed and subsoil of the submarine areas adjacent to the coast but outside the territorial sea to a depth of 200 metres, or beyond that depth where the depth of the superjacent waters admits of the exploitation of the natural resources of the area, by the Convention on the Continental Shelf, Geneva, 1958. The Act requires the licensing of persons searching for and taking sedentary organisms, of boats used to search for and take sedentary organisms, and of persons employing divers, trial divers and divers' tenders in taking sedentary organisms, if such activities are carried out in controlled areas of the continental shelf of Australia or the Territories for a commercial purpose. Provision is made for proclamation of sedentary organisms to which the Act applies, for the establishment of controlled areas of continental shelf in respect of specified sedentary organisms, and for the management and conservation of sedentary organisms in controlled areas (the last of these applying to all persons whether the purpose of the taking of the sedentary organism was commercial or not). The Act applies to all persons including foreigners, and to all boats including foreign boats.

### Whaling Act

This Act implements in Australian law the obligations imposed on Australia by virtue of our adherence to the International Convention for the Regulation of Whaling, Washington, 1946. The Act requires the licensing of factories engaged in treating whales and of ships (and aircraft) used for taking whales. It also provides for the management and conservation of whale stocks.

### Administration

Australian fisheries are administered by the authority having jurisdiction over the waters concerned. In inland waters and in waters within territorial limits, administration is the responsibility of the State or Territory fisheries authority. In proclaimed waters, and on the continental shelf beyond territorial limits, administration is the responsibility of the Commonwealth which, by agreement, has delegated to State fisheries authorities the necessary authorities for day-to-day administration of the Acts.

The administration of the fisheries is directed to a number of objectives, of which the two most important are conservation of the living resources in order to ensure their ability to sustain a maximum yield consistent with economy in their exploitation and the orderly conduct of the fishing industry. Fishery resources are common property and apart from fisheries such as those for rock lobster and abalone, where the numbers of boats and the quantities of fishing gear are controlled, the only other restrictions on the entry of boats into the Australian fishing industry are those relating to foreigners, and to processing and carrying boats in the northern prawn fishery. Management measures have been introduced in several fisheries to provide controls such as minimum sizes, closed areas, closed seasons and regulation of the types of fishing gear that may be used.

The Fisheries Development Trust Account (established under the *Fishing Industry Act* 1956) and the Fishing Industry Research Trust Account (established under the *Fishing Industry Research Act* 1969) are available to support financially, projects of kinds consistent with the purposes of those Acts for the development and management of the fisheries and fishing industry. The former is supported by the proceeds of the sale of the assets of the Australian Whaling Commission. The latter is a matching fund into which is paid each year an appropriation from Commonwealth Revenue equal to amounts collected from the fishing industry by the State Fisheries Authorities and expended by the States for the same purposes.

### Research

The main aim of fisheries research in Australia is to provide a background of biological, technical and economic information which will provide guidance for the efficient and rational utilisation of fisheries resources. To this end much of the research already undertaken has been directed at formulating recommendations for management of various fisheries. Research work is also carried out which is expected to lead to the development of new fisheries, the expansion of under-exploited fisheries, greater economy in operations and the use of more efficient equipment and methods.

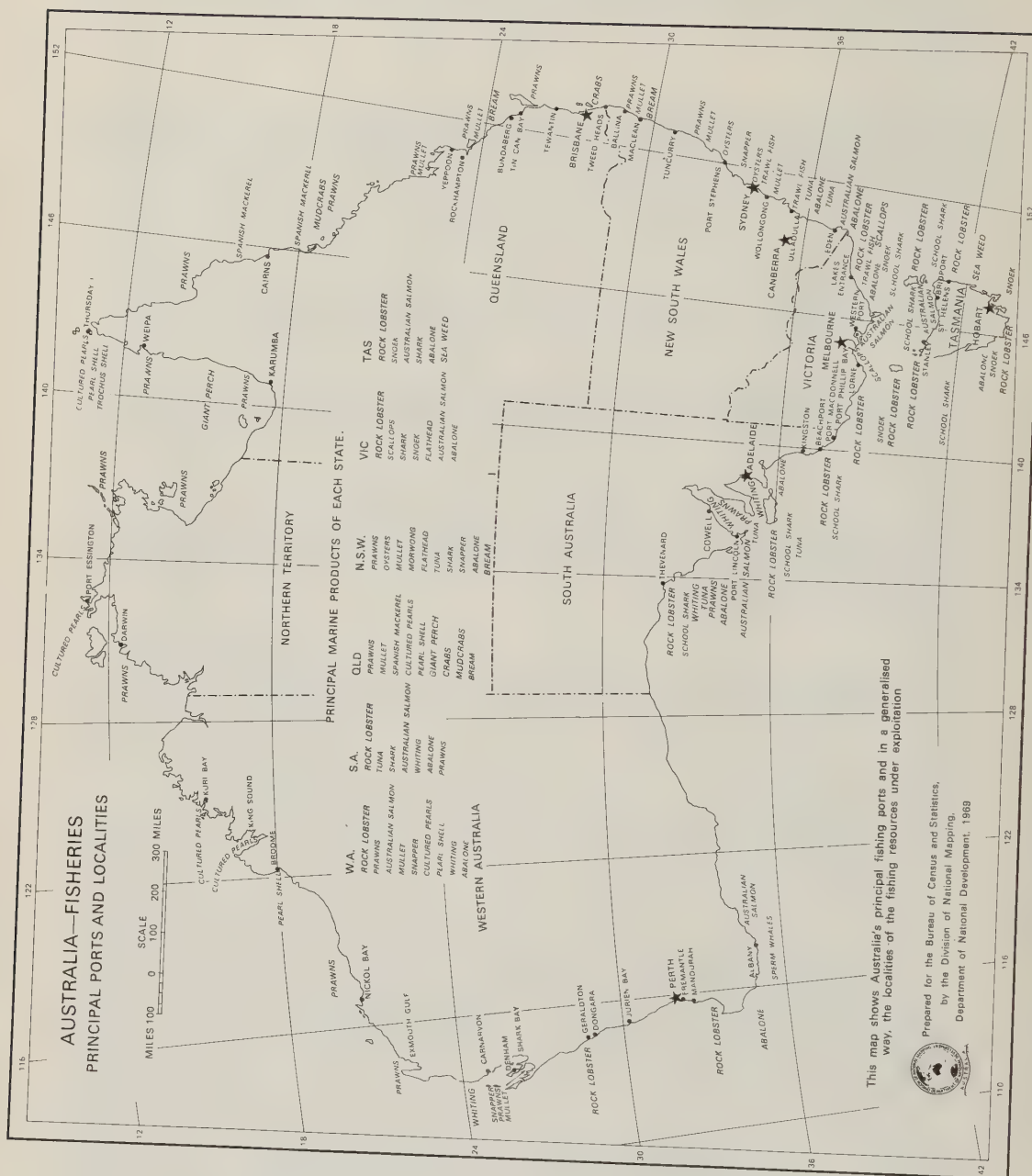
Organisations in Australia at present engaged in research into fisheries matters are:

- (i) C.S.I.R.O. Division of Fisheries and Oceanography, with its headquarters and main laboratory at Cronulla, N.S.W. (fisheries science and oceanography);
- (ii) C.S.I.R.O. Division of Food Research; main laboratories located at Ryde, N.S.W. (handling, storage, processing and transportation of fish);
- (iii) State fisheries departments (fisheries laboratories have been established in Perth, Hobart, Melbourne, Sydney and Brisbane; research vessels are operated by New South Wales, Victoria, Western Australia and Tasmania; the Department of the Northern Territory conducts a Prawn Research Unit in Darwin);
- (iv) Fisheries Division, Department of Primary Industry, Canberra (economic and management research, gear technology, extension and education service); and
- (v) private fishing companies (surveys of fisheries resources, research into handling and processing).

## Collection and presentation of fisheries statistics

### Source and basis of statistics

Statistics presented in this chapter have been collected by a number of authorities. The various State fisheries authorities have supplied, through the Deputy Commonwealth Statisticians in the States, the details of employment, boats, equipment, and production of the general fisheries. The Fisheries division of the Department of Primary Industry has supplied particulars of the whaling





industry and pearl-shell fishery. Statistics of the processing of general fisheries products and of overseas trade in the products of fishing and whaling have been compiled in the Commonwealth Bureau of Census and Statistics.

The statistics refer, in general, to financial years. However, statistics of pearl and trochus shell fishing, pearl culture operations and whaling refer to the season ended in the calendar year shown. For convenience of presentation, statistics of production of pearl and trochus shell have been assigned to financial years in the tables which follow. All overseas trade information refers to financial years.

In the preparation of Australian fisheries production statistics the quantities of individual products are generally in terms of the form in which they are taken from the water. For example, the statistics of fish production published in this chapter are in terms of 'estimated live weights' which are calculated from landed weights by using conversion factors for each species in each State. These conversion factors allow for the fact that the quantities of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Crustaceans are reported on an 'estimated live weight' basis and molluscs (edible) on a 'gross (in-shell) weight' basis. The figures of pearl-shell and trochus-shell refer to the actual quantities of dry shell for sale and exclude the weight of the fish.

## Boats and equipment used in fisheries

### Fish, crustaceans and molluscs (edible)

The boats used for the estuarine fisheries are mostly small vessels, propelled by diesel or petrol engines of low power. The offshore vessels range up to 120 feet in length and are almost invariably powered by diesel engines. Most of them have either insulated holds and carry ice, or are equipped with dry or brine refrigeration. Some rock lobster vessels are fitted with wells in which the catch is kept alive. About 25 per cent of the vessels registered in Australia for commercial fishing are over 30 feet in length. Recently, a number of well equipped, double rigged, prawn trawlers of 60 feet to 85 feet in length with large refrigeration capacity have been built for the rapidly developing northern prawn fisheries.

The following are the types of equipment most commonly used in the main fisheries: *mullet*, beach seine, gill net; *shark (edible)*, long-lines, gill net; *Australian Salmon*, beach seine; *snoek*, trolling lines; *flathead*, Danish seine, otter trawl; *snapper*, long-lines, traps, gill net, hand-line; *morwong*, Danish seine, otter trawl, traps; *whiting*, handlines, Danish seine, beach seine, gill net; *garfish*, beach seine; *mackerel*, trolling lines; *tuna*, pole and live-bait, trolling lines (lampara nets and purse seines are used for taking live bait for tuna); *prawns*, otter trawl, beam trawl, beach seine net; *rock lobster*, pots, traps; *scallops*, dredge, otter trawl; *abalone*, diving using hookah gear; and *pilchards*, *anchovies*, *jack mackerel*, and some *tuna*, purse seine.

### Pearls, pearl-shell and trochus-shell

Ketch-rigged luggers about fifty-five feet long which carry crews of eight to fourteen members are used for pearl-shell fishing in northern Australia.

### Whaling

The whaling industry is highly mechanised. Standard equipment includes aircraft to locate whales, diesel-powered catchers of about 100 to 125 feet in length, and tow boats.

### Boats and equipment employed by industry

The following two tables show details of boats and equipment employed in the taking of fish, crustaceans and edible molluscs, pearl-shell and trochus-shell, and the number of chasers and stations engaged in whaling operations. The reservations mentioned below regarding the use of employment information are also applicable to these tables. Boats employed in more than one industry are classified to their main activity.

**FISHERIES: BOATS AND EQUIPMENT EMPLOYED AND WHALING STATIONS  
OPERATING, STATES AND NORTHERN TERRITORY, 1971-72**

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
<b>General fisheries—</b>									
Boats employed . . . . .	No.	3,077	808	1,828	(a)1,652	1,508	588	130	9,591
Value of boats and equipment	\$'000	13,066	7,567	23,959	n.a.	20,060	7,717	7,728	(b)80,097
<b>Edible oyster fisheries—</b>									
Boats employed . . . . .	No.	1,749	..	135	..	..	n.a.	..	(c)1,884
Value of boats and equipment	\$'000	n.a.	..	n.a.	..	..	n.a.	..	n.a.
<b>Pearl-shell and trochus-shell—</b>									
Boats employed(d)	No.	..	..	13	..	10	..	..	23
<b>Whaling(d)—</b>									
Chasers . . . . .	No.	..	..	..	..	3	..	..	3
Stations operating . . . . .	..	..	..	..	..	1	..	..	1

(a) Reduction compared with 1970-71 figure caused by adoption of new registration system in South Australia. (b) Incomplete; excludes South Australia. (c) Incomplete; excludes Tasmania. (d) Source: Department of Primary Industry.

**FISHERIES: BOATS AND EQUIPMENT EMPLOYED AND WHALING STATIONS  
OPERATING, AUSTRALIA, 1967-68 TO 1971-72**

		1967-68	1968-69	1969-70	1970-71	1971-72
<b>General fisheries—</b>						
Boats employed . . . . .	No.	9,354	9,244	(a)8,857	(a)9,322	(a)9,591
Value of boats and equipment . . . . .	\$'000	51,456	(b)64,072	(b)71,376	(b)79,711	(b)(c)80,097
<b>Edible oyster fisheries—</b>						
Boats employed(d)	No.	1,599	1,788	1,805	1,829	1,884
Value of boats and equipment . . . . .	\$'000	(d)1,444	(d)1,744	(d)1,741	(d)1,844	(e)2,843
<b>Pearl-shell and trochus-shell—</b>						
Boats employed(f)	No.	49	33	29	28	23
<b>Whaling(f)—</b>						
Chasers . . . . .	No.	3	3	3	3	3
Stations operating . . . . .	..	1	1	1	1	1

(a) Not comparable with 1968-69 and earlier years because of change in basis of counting in South Australia. (b) Not comparable with 1967-68 and earlier years because of changes in methods of valuation in Western Australia. (c) Incomplete; excludes South Australia. (d) Incomplete; excludes Tasmania. (e) Incomplete; excludes Queensland and Tasmania. (f) Source: Department of Primary Industry.

## Employment in fisheries

### Classification of registered commercial fishermen by industry

The following two tables are derived mainly from the licensing records of the various State fisheries authorities. Because the definitions and licensing procedures used by these authorities are not uniform the statistics should not be used to compare the relative productivities of fishing industries in the various States. Persons engaged in more than one industry are classified according to their main activity, and so may be classified differently from one year to the next.

### PERSONS EMPLOYED ON FISHING BOATS: STATES AND NORTHERN TERRITORY 1971-72(a)

<i>Industry</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
General fisheries . . . . .	4,545	1,534	3,595	(b)3,014	3,167	1,207	532	17,594
Edible oyster fisheries . . . . .	1,400	..	n.a.	..	2	n.a.	..	(c)1,402
Pearl-shell and trochus-shell(d)	..	..	171	..	116	..	..	287
<b>Whaling(d)—</b>								
At sea . . . . .	..	..	..	..	51	..	..	51

(a) For all States except Western Australia, the figures for general fisheries refer to number of persons (including skippers) reported as usually employed on boats. Persons reported as usually employed on more than one boat for a particular year are counted more than once for that year. For Western Australia, the figure for general fisheries refers to number of licensed commercial fishermen. (b) Reduction compared with 1970-71 figure caused by adoption of new definition of persons engaged in South Australia. (c) Incomplete; excludes Queensland and Tasmania. (d) Source: Department of Primary Industry.

## PERSONS EMPLOYED ON FISHING BOATS: AUSTRALIA, 1967-68 TO 1971-72(a)

Industry	1967-68	1968-69	1969-70	1970-71	1971-72
General fisheries(b)	14,965	16,460	15,629	16,279	17,594
Edible oyster fisheries	(c)1,319	(c)1,425	(c)1,717	(c)1,596	(d)1,402
Pearl-shell and trochus-shell(e)	538	473	422	416	287
Whaling(e)—					
At sea	45	48	51	51	51

(a) See footnote (a) to the table 'Persons Employed on Fishing Boats: States and Northern Territory 1971-72' above.  
 (b) Breaks in comparability of figures in this series occur in 1969-70 and 1971-72, due to changes in basis of counting in South Australia. (c) Incomplete; figure for Tasmania is not available. (d) Incomplete; excludes Queensland and Tasmania. (e) Source: Department of Primary Industry.

## Production, processing and domestic marketing of fisheries products

## Value of fisheries production

The following table shows the gross value and local value of fishing and whaling production by States. Because the value of materials used in the course of production is not available for all States it is not possible to show a comparison of net values. (See also the chapter Miscellaneous for an explanation of the value terms used.)

 FISHERIES: GROSS AND LOCAL VALUE OF PRODUCTION  
 STATES AND NORTHERN TERRITORY, 1967-68 TO 1971-72  
 (\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
GROSS VALUE								
1967-68	12,028	5,725	7,309	6,993	21,954	4,473	107	58,589
1968-69	11,517	5,933	8,089	7,683	23,717	4,864	1,191	62,994
1969-70	13,467	5,979	8,034	8,135	19,660	4,043	3,979	63,297
1970-71	15,329	7,310	10,985	9,236	25,127	5,984	4,132	78,103
1971-72	18,924	9,507	11,380	11,751	30,660	6,808	2,793	91,824
LOCAL VALUE(a)								
1967-68	10,212	5,153	6,896	6,162	21,805	3,668	107	54,003
1968-69	9,984	5,336	7,679	6,773	23,600	4,100	1,191	58,663
1969-70	11,514	5,304	7,609	7,183	19,536	3,343	3,979	58,468
1970-71	13,224	6,462	10,458	8,177	25,028	5,116	4,132	72,596
1971-72	16,284	8,811	10,780	10,398	30,469	5,929	2,793	85,464

(a) Local value is gross value less marketing costs.



**Production of selected fisheries**

The following tables show details of the quantities and values of production of selected fisheries in each State and the Northern Territory in 1971-72 and throughout Australia for the years 1967-68 to 1971-72.

**SELECTED FISHERIES PRODUCTS: PRODUCTION AND GROSS VALUE  
STATES AND NORTHERN TERRITORY 1971-72**

<i>Product</i>		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
<b>QUANTITY</b>									
Fish(a) . . . . .	tonnes	16,875	15,893	(b)4,511	10,898	5,926	2,380	391	56,874
Crustaceans(c) . . . . .	"	2,874	799	8,691	3,901	10,818	1,477	2,634	31,194
Molluscs (edible)(d) . . . . .	"	11,985	10,415	2,357	1,317	309	3,084	7	29,474
Pearl-shell(e)(g) . . . . .	"	..	..	n.a.	..	n.a.	..	n.a.	(f)478.8

<b>GROSS VALUE (\$'000)</b>									
Fish . . . . .		7,055	3,335	(b)2,160	3,185	1,414	715	191	18,055
Crustaceans . . . . .		4,968	1,970	7,788	7,716	24,949	3,794	2,566	53,751
Molluscs (edible) . . . . .		6,900	4,201	534	851	154	2,248	4	14,892
Pearl-shell(e)(g) . . . . .		..	..	n.a.	..	n.a.	..	n.a.	(f)334

(a) Estimated live weight. (b) Excludes freshwater fish, particulars of which are not available. (c) Gross weight.  
(d) Gross (in shell) weight. (e) Source: Department of Primary Industry. (f) Includes manufacturing shell produced from pearl culture operations. (g) Estimated.

**SELECTED FISHERIES PRODUCTS: PRODUCTION, AND GROSS VALUE  
AUSTRALIA, 1967-68 TO 1971-72**

<i>Product</i>		<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
<b>QUANTITY</b>						
Fish(a) . . . . .	tonnes	46,540	49,049	55,335	51,632	56,874
Crustaceans(b) . . . . .	"	24,502	23,205	25,293	32,273	31,194
Molluscs (edible)(c) . . . . .	"	(d)29,442	(e)19,307	21,623	27,672	29,474
Pearl-shell(f)(g) . . . . .	"	502.8	475.8	534.3	602.6	478.8
Trochus-shell(f) . . . . .	"	1.0	5.9	0.2	25.5	0.7

<b>GROSS VALUE (\$'000)</b>						
Fish(h) . . . . .		14,179	14,512	15,493	15,399	18,055
Crustaceans . . . . .		32,755	36,560	34,088	46,830	53,751
Molluscs (edible) . . . . .		(d)7,859	(e)6,608	8,087	11,790	14,892
Pearl-shell(f)(g) . . . . .		271	237	310	392	334
Trochus-shell(f) . . . . .		..	1	..	4	..

(a) Estimated live weight. Excludes freshwater fish caught in Queensland. (b) Gross weight. (c) Gross (in shell) weight. (d) Excludes oysters and mussels in Western Australia and oysters in Tasmania. (e) Excludes abalone and oysters in Western Australia. (f) Source: Department of Primary Industry. (g) Includes manufacturing shell produced from pearl culture. (h) Excludes freshwater fish caught in Queensland.

The following tables show details of the production and gross value of the main types of fish, crustaceans, and molluscs caught in each State and the Northern Territory in 1971-72 and throughout Australia for the years 1967-68 to 1971-72.

**Fish**

**FISH: PRODUCTION, BY TYPE, STATES AND NORTHERN TERRITORY, 1971-72**  
(tonnes estimated live weight)

Type	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Freshwater types—	241	256	n.a.	630	..	25	..	(a)1,153
Marine types—								
Tuna . . . . .	(b)5,033	159	17	4,348	629	44	..	10,230
Mackerel . . . .	46	..	803	..	29	4	17	899
Snoek . . . . .	131	1,533	..	..	..	581	..	2,245
Mullet . . . . .	2,038	277	1,427	229	706	11	15	4,701
Tailor . . . . .	137	10	365	..	45	..	..	557
Bream (including Tar-whine) . . . . .	246	314	215	15	26	..	..	815
Australian salmon . . . . .	516	586	..	1,881	1,730	508	..	5,221
Ruff . . . . .	..	34	..	277	864	..	..	1,175
Snapper . . . . .	708	299	49	528	185	..	..	1,768
Morwong . . . . .	1,136	24	..	1	5	13	..	1,179
Whiting . . . . .	137	417	291	768	234	..	..	1,847
Luderick . . . . .	591	51	63	..	..	..	..	705
Flathead . . . . .	1,479	743	80	16	9	64	..	2,390
Shark . . . . .	772	3,625	61	1,480	492	859	8	7,297
Leatherjacket . . . . .	847	16	..	..	13	2	..	879
Garfish . . . . .	121	182	67	459	24	34	2	889
Other . . . . .	2,698	7,366	1,072	267	935	237	348	12,923
Total marine . . . . .	16,634	15,637	4,511	10,268	5,926	2,355	391	55,721
Grand total . . . . .	16,875	15,893	(c)4,511	10,898	5,926	2,380	391	56,874

(a) Incomplete; excludes Queensland. in Queensland not available.

(b) Source: C.S.I.R.O.

(c) Incomplete: figure for freshwater fish caught

**GROSS VALUE OF FISH, BY PRINCIPAL TYPES, 1971-72**  
(\$'000)

Type of Fish	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Tuna . . . . .	1,553	29	2	767	123	11	..	2,485
Snoek . . . . .	43	282	..	..	..	71	..	395
Mullet . . . . .	651	55	436	45	201	3	6	1,398
Australian salmon . . . . .	120	91	..	290	214	101	..	816
Snapper . . . . .	624	204	39	233	59	..	..	1,159
Morwong . . . . .	376	9	..	..	1	3	..	389
Flathead . . . . .	685	245	43	6	2	17	..	998
Shark . . . . .	177	1,588	11	351	164	345	3	2,639
All other species . . . . .	2,827	831	(a)1,629	1,491	651	164	181	7,776
Total fish . . . . .	7,055	3,335	(a)2,160	3,185	1,414	715	191	18,055

(a) Excludes freshwater fish, particulars of which are not available.

**FISH: PRODUCTION, BY TYPE, AUSTRALIA, 1967-68 TO 1971-72**  
(tonnes estimated live weight)

Type	1967-68	1968-69	1969-70	1970-71	1971-72
Freshwater types(a)	491	768	678	1,018	1,153
Marine types—					
Tuna(b)	6,803	8,916	8,450	6,802	10,230
Mackerel	1,007	796	763	903	899
Snoek	3,314	3,895	4,124	2,951	2,245
Mullet	5,316	5,072	5,272	5,527	4,701
Tailor	618	441	518	544	557
Bream (including Tarwhine)	937	901	936	945	815
Australian salmon	7,102	4,293	4,764	3,463	5,221
Ruff	596	822	865	834	1,175
Snapper	1,609	1,319	1,600	1,710	1,768
Morwong	1,352	1,192	852	1,029	1,179
Whiting	1,669	1,741	2,070	1,859	1,847
Luderick	674	640	748	734	705
Flathead	2,436	2,756	2,793	2,341	2,390
Shark	6,024	7,175	7,743	7,314	7,297
Leatherjacket	387	369	762	946	879
Garfish	753	864	892	705	889
Other	5,454	7,089	11,505	12,005	12,923
Total marine	46,050	48,280	54,658	50,614	55,721
Grand total	46,540	49,049	55,335	51,632	56,874

(a) Excludes freshwater fish caught in Queensland, particulars of which are not available. (b) Includes estimate by C.S.I.R.O. for New South Wales.

### Crustaceans

**CRUSTACEANS: PRODUCTION, BY TYPE, STATES AND NORTHERN TERRITORY, 1971-72**  
(tonnes gross weight)

Type	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Rock lobster(a)	216	782	(b)60	2,377	8,246	1,469	..	13,151
Prawns	2,523	14	8,261	1,524	2,519	..	2,629	17,470
Crabs	135	3	370	..	53	8	5	573
Total	2,874	799	8,691	3,901	10,818	1,477	2,634	31,194

(a) Includes freshwater crayfish caught in New South Wales and Victoria, bay lobster taken in New South Wales, Queensland and Western Australia and yabbies taken in South Australia and Victoria. (b) Estimated.

**CRUSTACEANS: PRODUCTION, BY TYPE, AUSTRALIA, 1967-68 TO 1971-72**  
(tonnes gross weight)

Type	1967-68	1968-69	1969-70	1970-71	1971-72
Rock lobster(a)	15,017	13,101	(b)11,460	(b)(c)13,043	(b)(d)13,151
Prawns	9,118	9,713	13,366	18,752	17,470
Crabs	367	390	468	477	573
Total	24,502	23,205	25,293	32,273	31,194

(a) Includes freshwater crayfish caught in New South Wales and Victoria and bay lobster taken in Queensland. (b) Includes also bay lobster taken in New South Wales and Western Australia. (c) Also includes yabbies taken in South Australia. (d) Also includes yabbies taken in Victoria and South Australia.



## Molluscs (edible)

MOLLUSCS: PRODUCTION, BY TYPE, STATES AND NORTHERN TERRITORY, 1971-72  
(tonnes gross (in-shell) weight)

Type	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Octopus . . . . .	..	13	..	52	..	..	..	65
Squid . . . . .	..	94	54	35	18	8	..	209
Cuttlefish . . . . .	..	2	..	..	..	..	..	2
Oysters . . . . .	10,224	..	(a)145	3	1	54	7	10,434
Scallops . . . . .	324	7,565	2,158	..	47	52	..	10,146
Pipi . . . . .	..	..	..	86	..	..	..	86
Mussels . . . . .	42	534	..	..	..	..	..	577
Abalone . . . . .	1,394	2,208	..	1,140	243	2,971	..	7,956
<b>Total . . . . .</b>	<b>11,985</b>	<b>10,415</b>	<b>2,357</b>	<b>1,317</b>	<b>309</b>	<b>3,084</b>	<b>7</b>	<b>29,474</b>

(a) Estimated.

MOLLUSCS: PRODUCTION, BY TYPE, AUSTRALIA, 1967-68 TO 1971-72  
(tonnes gross (in-shell) weight)

Type	1967-68	1968-69	1969-70	1970-71	1971-72
Octopus . . . . .	(a)8	(a)12	(a)28	86	65
Squid . . . . .	(b)171	(b)170	(b)254	(c)211	209
Cuttlefish(b) . . . . .	..	(a)3	(a)5	(a)1	2
Oysters . . . . .	(d)7,546	(e)7,519	9,359	9,807	10,434
Scallops . . . . .	13,044	5,012	5,551	9,293	10,146
Pipi . . . . .	..	..	..	47	86
Mussels . . . . .	(e)112	54	304	535	577
Abalone . . . . .	8,560	(e)6,539	6,123	7,692	7,956
<b>Total . . . . .</b>	<b>(f)29,442</b>	<b>(f)19,307</b>	<b>(f)21,623</b>	<b>(f)27,672</b>	<b>29,474</b>

(a) Production for South Australia is included with squid. (b) Includes cuttlefish and octopus for South Australia.  
(c) Includes cuttlefish for South Australia. (d) Excludes particulars for Western Australia and Tasmania which are not available for publication. (e) Excludes particulars for Western Australia which are not available for publication.  
(f) Incomplete, see relevant footnotes.

## Pearls, pearl-shell and trochus-shell

PEARL CULTURE OPERATIONS: AUSTRALIA, 1967 TO 1971  
(Source: Department of Primary Industry)

		1967	1968	1969	1970	1971
Live shell introduced . . . . .	No. of shells	783,733	838,622	796,831	444,727	333,280
	tonnes	434.5	447.2	410.8	179.8	107.4
Production of—						
Cultured pearls—						
Round and baroque pearls	No.	56,653	76,337	77,858	80,445	107,777
	momme(a)	30,061	42,854	44,334	48,314	62,179
	\$'000	1,539	2,499	3,020	2,029	3,165
Half pearls . . . . .	No.	266,466	522,247	631,476	472,259	413,964
	\$'000	680	1,165	1,409	606	366
Manufacturing shell . . . . .	tonnes	170.9	216.8	265.9	237.1	164.3
	\$'000	80	86	120	116	89

(a) A momme is a pearl weight measurement equivalent to 3.769 grams.

**PEARL-SHELL AND TROCHUS-SHELL: PRODUCTION  
STATES AND NORTHERN TERRITORY, 1967 TO 1971**

(Source: Department of Primary Industry)

(Tonnes)

	1967	1968	1969	1970	1971
Pearl-shell(a)—					
Queensland . . . . .	192.2	140.1	121.4	226.6	n.a.
Western Australia . . . . .	134.8	118.9	139.9	127.8	n.a.
Northern Territory . . . . .	4.9	..	7.1	11.2	n.a.
<b>Australia . . . . .</b>	<b>331.9</b>	<b>259.0</b>	<b>268.4</b>	<b>365.6</b>	<b>314.5</b>
Trochus-shell—					
Queensland . . . . .	1.0	5.9	0.2	25.5	0.7

(a) Excludes manufacturing shell produced from pearl culture operations.

### Whales

**WHALES TAKEN(a): AUSTRALIA, 1968 TO 1972**

(Source: Department of Primary Industry)

(Number)

	1968	1969	1970	1971	1972
Male . . . . .	585	637	775	820	792
Female . . . . .	73	42	24	40	161
<b>Total . . . . .</b>	<b>658</b>	<b>679</b>	<b>799</b>	<b>860</b>	<b>953</b>

(a) Sperm whales only were taken.

### Processing of fish, crustaceans and molluscs

Ice is extensively used for the chilling of fish taken in estuarine and inshore fisheries. Refrigeration is used particularly on vessels operating in the tuna fishery and prawn fisheries to chill or freeze the catch. Refrigerated brine tanks are most commonly used.

Processing plants are located strategically throughout Australia close to fishing grounds. In recent years a number of shore-based plants have been established in remote areas of northern Australia to service the expansion of the prawn fishery. Processing vessels receiving prawns from a fleet of trawlers are also operating in this fishery.

Rock lobsters, prawns and scallops are frozen for export; tuna, snoek, Australian salmon and abalone are canned; small amounts of fish are smoked; some molluscs are bottled. Hand labour is still used extensively in processing operations, but mechanisation is being progressively introduced.

Fish, crustaceans and molluscs intended for export are processed in establishments registered under the Export (Fish) Regulations. Edible fish for local consumption is mainly dispatched fresh iced to markets. A survey of the Australian seafood processing industry was published by the Department of Trade and Industry in 1971.

## FISH PROCESSING (EXCEPT FREEZING): AUSTRALIA, 1967-68 TO 1971-72

(tonnes)

	1967-68	1968-69	1969-70	1970-71	1971-72
Fish used(a)—					
Whole . . . . .	10,952	11,486	11,182	8,707	10,893
Headed and or gutted . . . . .	3,549	2,350	2,246	1,393	1,473
Production(b)—					
Canned fish(c)					
Australian salmon . . . . .	3,055	1,981	2,520	1,923	2,226
Tuna . . . . .	3,716	3,909	3,679	2,771	3,310
Other . . . . .	1,120	859	885	456	763
Total canned fish . . . . .	7,892	6,749	7,085	5,149	6,299
Smoked fish . . . . .	117	620	616	694	557
Fish paste . . . . .	594				
Fish meal(d) . . . . .	777	579	1,747	2,014	2,315

(a) Fish used for canning (including fish loaf), smoking and the manufacture of fish paste, but excluding the weight of oysters, other shellfish and crustaceans used for canning. (b) Excludes canned rock lobsters, prawns, oysters, and clams, details of which are not available for publication. (c) Includes fish loaf, fish cakes, etc. (d) Excludes whale meat.

## Whale processing

Oil from sperm whales is used in the manufacture of soap, plastics and watch lubricants, and in automatic transmission systems in motor cars.

## WHALE PROCESSING: AUSTRALIA, 1968 TO 1972

(Source: Department of Primary Industry)

		1968	1969	1970	1971	1972
Quantity of sperm whale oil produced	barrels(a)	23,474	26,142	31,686	36,414	34,632
Value of whale oil produced . . . . .	\$'000	435	607	1,082	1,390	993
Value of by-products (meal, meat, solubles, etc.) . . . . .	„	313	349	481	553	585
Total value of products . . . . .	„	748	956	1,563	1,943	1,578

(a) 6 barrels = approximately 1.016 tonnes.

## Domestic marketing of fisheries products

Although virtually the whole of the tuna and Australian salmon catches and a large proportion of the snook catch are canned, the greater part of Australian fish production is marketed fresh or frozen.

Marketing arrangements for fresh fish vary. In New South Wales fish marketing is the responsibility of the Fish Marketing Authority, which operates the Metropolitan and Wollongong Fish Markets. In other coastal centres of New South Wales fishermen's co-operatives may become registered as local fish markets. In Queensland the Fish Board sells all production on behalf of fishermen in that State, except fish intended for export and interstate trade. In Victoria, South Australia, Western Australia and Tasmania there is no restriction on market outlets. In South Australia the majority of fishermen are members of the South Australian Fishermen's Co-operative Ltd, which handles the whole of their production. Other outlets for fish products include retail and catering establishments.

## Consumption of edible fisheries products

Particulars of the estimated supplies of fish, crustaceans and molluscs available for consumption per head of population, in terms of edible weight, are included in the following table. For the purpose of compiling this table, an allowance has been made for the non-commercial fish catch.



**FISHERIES PRODUCTS: ESTIMATED SUPPLIES AVAILABLE FOR CONSUMPTION  
AUSTRALIA, 1967-68 TO 1971-72**  
(kg edible weight per head per annum)

	1967-68	1968-69	1969-70	1970-71	1971-72
Fresh or frozen—					
Fish—					
Australian origin(a) . . . . .	1.4	1.6	1.8	1.6	1.5
Imported . . . . .	1.6	1.7	1.6	2.1	1.5
Crustaceans and molluscs . . . . .	1.0	0.7	0.7	1.0	1.0
Cured (including smoked and salted) . . . . .	0.3	0.5	0.4	0.5	0.3
Canned—					
Australian origin . . . . .	0.3	0.5	0.6	0.5	0.6
Imported . . . . .	1.0	1.0	0.9	0.9	0.9
<b>Total . . . . .</b>	<b>5.5</b>	<b>5.9</b>	<b>6.0</b>	<b>6.5</b>	<b>5.9</b>

(a) Includes an allowance for non-commercial catch of fish; excludes fish exported.

**Overseas trade in fisheries products**

**Edible fisheries products**

**OVERSEAS TRADE IN EDIBLE FISHERIES PRODUCTS: AUSTRALIA  
1969-70 TO 1971-72**

	Quantity (tonnes)			Value (\$'000 f.o.b.)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
<b>IMPORTS</b>						
Fresh, chilled, frozen or boiled(a) . . . . .	22,802	30,216	23,296	14,274	21,508	17,792
Smoked, dried, salted or in brine . . . . .	3,150	3,806	3,826	2,041	3,128	3,106
Potted or concentrated . . . . .	99	97	78	166	210	149
Canned—						
Herrings . . . . .	1,920	2,297	1,936	1,160	1,434	1,436
Salmon . . . . .	4,471	4,311	5,465	7,387	6,989	8,659
Sardines, Sild, brisling, etc. . . . .	2,785	2,293	2,720	2,442	2,383	3,272
Tuna . . . . .	183	71	115	151	63	131
Other fish . . . . .	1,117	1,200	1,232	954	1,116	1,177
Crustaceans and molluscs . . . . .	854	867	979	1,664	1,763	2,080
<b>Total canned . . . . .</b>	<b>11,329</b>	<b>11,040</b>	<b>12,448</b>	<b>13,758</b>	<b>13,748</b>	<b>16,755</b>
Other prepared or preserved fish, crustaceans and molluscs . . . . .	1,820	2,162	2,377	2,892	3,100	3,549
<b>Grand total . . . . .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>33,131</b>	<b>41,694</b>	<b>41,352</b>

**EXPORTS**

(Australian produce only; excludes re-exports)

Fresh, chilled or frozen(b)—						
Fish . . . . .	440	1,632	3,113	222	800	1,473
Crustaceans and molluscs—						
Rock lobster tails . . . . .	3,873	4,455	4,652	19,686	27,333	33,074
Prawns . . . . .	4,790	6,615	7,847	12,135	16,930	26,026
Other . . . . .	1,800	2,223	2,270	3,266	4,488	5,279
Crustaceans and molluscs boiled in water . . . . .	439	331	344	1,193	889	1,087
Prepared and preserved—						
Fish . . . . .	218	550	314	202	545	353
Crustaceans and molluscs . . . . .	1,609	2,292	2,536	1,992	4,546	5,877
Other edible fisheries products . . . . .	72	64	44	280	84	59
<b>Grand total . . . . .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>38,976</b>	<b>55,615</b>	<b>73,228</b>

(a) Excludes frozen smoked, which is included in item Smoked, dried, etc.

(b) Excludes frozen smoked, which is included in item Other edible fisheries products.

## Non-edible fisheries products

OVERSEAS TRADE IN SELECTED NON-EDIBLE FISHERIES PRODUCTS: AUSTRALIA  
1969-70 TO 1971-72

		Quantity			Value (\$'000 f.o.b.)		
		1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
IMPORTS							
Fish waste . . . . .	tonnes	992	1,586	1,241	143	241	197
Fish heads, fresh or frozen . . . . .	"	319	429	1,173	42	70	208
Fish, live(a) . . . . .	'000	3,241	4,545	6,031	240	332	461
Fish meal . . . . .	tonnes	26,580	31,797	27,632	3,006	4,969	3,988
Whale oil . . . . .	'000 litres	3,832	4,105	482	568	834	124
Cod-liver oil . . . . .	"	309	346	314	83	118	114
Other oils (including seal oil) . . . . .	"	632	736	536	102	138	158
Coral and shells and their waste . . . . .	tonnes	47	82	63	24	40	30
Tortoise shell (including turtle shell, claws, waste) . . . . .	"	1	2	..	12	18	..
Pearls . . . . .	"	..	..	..	436	832	132
<b>Total . . . . .</b>		..	..	..	<b>4,656</b>	<b>7,592</b>	<b>5,412</b>
EXPORTS							
(Australian produce only; excludes re-exports)							
Australian produce—							
Whale oil . . . . .	'000 litres	4,532	8,528	6,278	492	1,405	1,014
Other oils . . . . .	"	5	5	5	1	1	2
Pearl-shell . . . . .	tonnes	671	611	459	574	601	456
Other shell (including trochus) . . . . .	"	98	77	154	17	24	39
Natural pearls . . . . .	"	..	..	..	24	18	8
Cultured pearls—							
Round pearls . . . . .	No.	79,250	105,024	38,749	1,161	1,561	536
Baroque pearls . . . . .	"	10,276	10,875	4,018	74	67	23
Half round pearls . . . . .	"	533,919	245,570	181,035	1,354	479	360
<b>Total . . . . .</b>		..	..	..	<b>3,697</b>	<b>4,156</b>	<b>2,439</b>

(a) Live fish whether or not fit for human consumption.





## CHAPTER 26

### MINERAL INDUSTRY

Further detailed statistics and information on the subjects dealt with in this chapter are contained in the annual printed bulletin *The Australian Mineral Industry—Annual Review* and other publications issued by the Bureau of Mineral Resources, Geology and Geophysics, which also issues, in conjunction with this Bureau, a quarterly publication, *The Australian Mineral Industry* (10.17), comprising two parts—Part 1—Quarterly Review and Part 2—Quarterly Statistics. The annual statistical bulletins *Mining Establishments, Summary of Operations* (10.55), *Mining Establishments* (10.60), *Mineral Production* (10.51), *Mineral Exploration* (10.41), and *Overseas Participation in Australian Mining Industry* (10.42) of this Bureau contain economic statistics of the industry prepared and published as soon as possible after the data have been compiled. A monthly statistical bulletin *Minerals and Mineral Products* (10.19) is issued also, and other current statistics on mining or mine products are contained in the *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5), and the *Monthly Bulletin of Production Statistics* (12.14).

*All quantity data in this chapter are quoted in imperial units throughout the text and metric units within statistical tables except where otherwise indicated.*

#### GENERAL

##### Geology

###### General geology

Most of the western and central part of the Australian continent consists of basement rocks of Precambrian age. Younger Palaeozoic rocks, mostly of geosynclinal origin, form a discontinuous belt several hundred miles wide extending from north Queensland to Tasmania. Mesozoic platform sediments form a broad zone separating the Palaeozoic and Precambrian rocks and extending from the Gulf of Carpentaria to central New South Wales. Cainozoic rocks occur mainly in Victoria, south-western New South Wales and southern South Australia, and as residual basalt cappings over extensive areas of the Palaeozoic rocks of eastern Australia.

###### Economic geology

Minerals of economic significance occur widely throughout the Precambrian and Palaeozoic rocks of the continent. Palaeozoic mineralisation is perhaps more varied, but the Palaeozoic deposits now being worked are in general smaller than those found in Precambrian rocks. Most of Australia's metallic mineral deposits occur within two broad regions, a region of Precambrian rocks in the west and central areas of the continent and a region of younger Palaeozoic rocks in the east.

The major deposits of metallic ore minerals, including those of iron, lead, zinc, silver, copper, uranium, nickel, and gold, are contained in the Precambrian rocks of the Australian shield. Smaller deposits of ores of tin, tungsten, tantalum, beryllium, manganese, cobalt, and mica are also contained in these rocks.

The mineralised Palaeozoic rocks contain major deposits of gold, now mostly worked out, and a few large copper and lead-zinc-silver ore occurrences. Smaller amounts of ores of tin, tungsten, molybdenum, bismuth, antimony, and ores of other metals also occur in these rocks.

Outside these two main categories, however, there are some metallic mineral deposits of considerable economic importance which were formed during the Tertiary Period. These include bauxite (the ore of aluminium) which occurs as a surface capping over rocks of various ages. Extensive deposits of bauxite occur at Weipa on Cape York peninsula in north Queensland, at Gove on the north-eastern tip of the Northern Territory, in the Darling Range in Western Australia, and near Kalumburu in the north-west of Western Australia. These deposits are the result of a long period of weathering and reworking.

Other important deposits which are the results of weathering are the lateritic nickel deposits at Greenvale and Rockhampton in Queensland, and in the Kalgoorlie and Wingellina areas of Western Australia. Mineral sands, another important exception, contain rutile and ilmenite (ores of titanium), zircon (zirconium ore), monazite (thorium ore), and other minerals, and are particularly well developed on the central and northern New South Wales coast, southern Queensland and south-western Western Australia. The deposits of the eastern States are considered to be final derivatives of Mesozoic rocks. The Western Australian deposits are thought to be derivatives of the Precambrian granites of the Australian shield.

Occurrences of fuel minerals (coal, oil and natural gas) are characteristically located in former sedimentary basins. Large areas of Australia are covered by these basins, and more than twenty major sedimentary basins have been identified on the Australian mainland. In addition, sedimentary basins are known to exist in off-shore areas adjacent to the Australian coast. The individual basins range in area from 4,000 to 680,000 square miles and contain marine and continental sedimentary rocks ranging in maximum thickness from 1,000 to about 30,000 feet and including rocks of all ages from Proterozoic to Tertiary.

The main Australian deposits of black coal are in eastern Queensland and New South Wales. Most are Permian in age, and they predominantly have a bituminous rank; both coking and non-coking types occur. The extensive brown coal deposits of Victoria were formed during the Tertiary Period and are used to produce electricity for that State.

Crude oil and natural gas have been found in a number of sedimentary basins. In the Bowen-Surat Basin, Queensland, commercial deposits of oil exist at the Moonie, Alton, Bennett and Major fields, and commercial deposits of natural gas exist in the Roma, Surat and Rolleston areas. Gas from the Roma area is used to supply Brisbane. Gas reserves are present in the Adavale Basin at Gilmore, and in a dozen or so accumulations in the Cooper Basin which extends from South Australia into Queensland and the Northern Territory. In general the oil reservoir rocks in Queensland are of Lower Jurassic age, and the gas reservoir rocks are of Mesozoic and Permian age. In the Gippsland Basin, off-shore from Victoria in Bass Strait, oil in commercial quantities was discovered in the Kingfish, Halibut, Tuna, Barracouta and the Mackerel field and commercial natural gas in the Marlin, Barracouta, Snapper and Tuna fields. Cretaceous and Tertiary strata are the reservoir rocks. Eastern Victoria and Melbourne are now supplied with gas from Marlin and Barracouta fields. Oil is being piped from Kingfish, Halibut and Barracouta. In the Cooper Basin, South Australia, commercial deposits of natural gas were discovered at Gidgealpa, Moomba, Daralingie, Toolachee, Merrimelia, Della, Strzelecki, Mudrangie, Moorari, Coonatie, Fly Lake, Big Lake, Dullingari, Brumby, Kanowana and Burke and gas and oil at Tirrawarra, Moorari, Fly Lake and Brolga. The reservoir rocks are of Permian age and plans to supply Sydney and some large towns in New South Wales with gas from the Cooper Basin in 1974 are well advanced. In the Carnarvon Basin, Western Australia, commercial crude oil mainly in the Cretaceous formations, and also to a lesser degree in the Jurassic, is being produced from Barrow Island. Off-shore, on the northwest continental shelf, major gas deposits have been discovered at Scott Reef, Rankin, Goodwyn, Angel, North Rankin and Eaglehawk; oil was discovered at Rankin, Legendre, Madeleine, Eaglehawk and Goodwyn which are at present non-commercial. Further south, onshore in the Perth Basin, natural gas in commercially significant quantities was discovered in the Yardarino, Gingin, Dongara, Mondarra and Walyering areas, the reservoir rocks being of Lower Jurassic, Lower Triassic and Permian ages. Perth is now supplied with natural gas from the Dongara, Mondarra and Gingin fields and this will also be piped to the large towns. In the off-shore Bonaparte Gulf Basin high pressure natural gas was encountered at the Petrel and Tern prospects. In the Amadeus Basin, Northern Territory, natural gas was discovered in commercial quantities in formations of Ordovician age at Mereenie and Palm Valley. These are not yet being exploited but several proposals are under consideration. The gas accumulation in the Mereenie Anticline is underlain by the oil column in the same Pacoota Sandstone reservoir.

The most important non-metallic minerals are asbestos, clays, sand and gravel, limestone, gypsum, and silica. Salt won by evaporation of sea water is another important product.

Opals are found in the flat-lying sedimentary beds of the Great Artesian Basin in Queensland, New South Wales and South Australia and were formed during the Tertiary Period.

A table showing most of the larger mineral deposits now being mined in Australia according to the age of the geological formation in which they are found is shown in Year Book No. 53, page 1062.

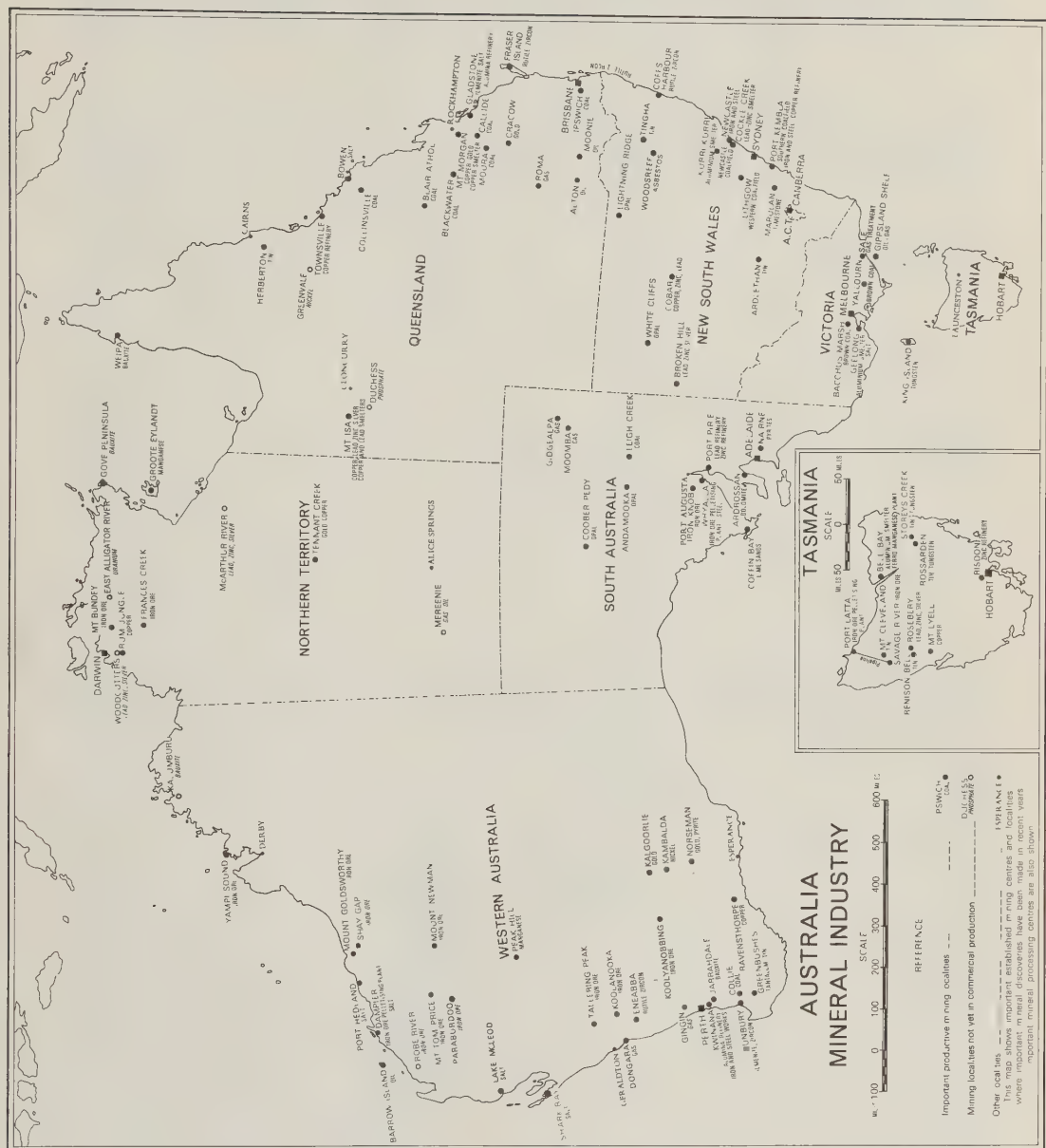


PLATE 50



### Mineral resources

Australia is self-sufficient in most minerals of economic importance and much more than self-sufficient in some. The following table summarises, in a general way, known reserves and production of the principal metals and minerals in relation to Australian consumption of these commodities and present export availability. Many qualifications are necessary to a simple summary of this kind, and the table should be read in conjunction with the following detailed notes on principal minerals.

#### RESERVES OF MINERALS: AUSTRALIA

(Source: Bureau of Mineral Resources, Geology and Geophysics)

<i>Production</i>	<i>Reserves adequate</i>	<i>Reserves uncertain</i>	<i>Reserves negligible</i>
Production sufficient for domestic demand and exports	Asbestos (chrysotile) Barite Bauxite Bismuth Cadmium Coal (black) Copper Gold Gypsum Iron ore Lead Manganese ore (metallurgical) Mineral sands(a) Natural gas Nickel Opal Salt Silver Tin Tungsten Zinc	Antimony Beryl Glass sands Talc Tantalite	
Production sufficient for domestic demand	Clays (except light grade china clay) Coal (brown) Dolomite Felspar Limestone	Sillimanite	
Production not sufficient for domestic demand	Lithium minerals Phosphate rock Sulphides (as source of sulphur)	Abrasives Arsenic Bentonite China clay Chromite Cobalt Crude oil Diatomite Fluorite Magnesite Manganese ore (chemical) Mercury Mineral pigments Molybdenum Platinum	
Production nil	Magnesium Potassium salts Vanadium	Asbestos (crocidolite) Diamonds Graphite Vermiculite	Borates Nitrates Sulphur

(a) Ilmenite, monazite, rutile, zircon.

### Individual minerals

**Bauxite.** As a result of discoveries at Weipa, Queensland, Gove, Northern Territory, and in the Darling Range and Kimberley area in Western Australia, Australia's reserves of bauxite are known to be very large, perhaps the largest in the world. Total reserves in the Weipa area are believed to be in excess of 3,000 million tons, while proved reserves at Gove are reported to contain 250 million tons of bauxite. In the Darling Range, reserves of economic grade bauxite are estimated to be about 1,000 million tons spread over several locations. Another significant deposit of over 200 million tons has been proved in the Mitchell Plateau area in the Kimberley District of Western Australia.

**Coal.** Australia has coal resources of all types adequate to provide for future domestic requirements and a substantial export surplus. Australia's coal reserves are concentrated mainly in the mainland eastern States. The bituminous coal is located mainly in New South Wales and Queensland; Victoria has very substantial brown coal reserves in the Latrobe Valley. The value of coal production is second only to iron ore, as is the value of coal exports. An inventory of Australian coal resources at December 1970 was published in September 1971 by the Bureau of Mineral Resources in the *Australian Mineral Industry—Quarterly Review* vol. 23, no. 4.

**Copper.** The principal deposit of this metal is at Mount Isa, Queensland where ore reserves were estimated at 140 million tons in 1972. Other important deposits are situated at Cobar, New South Wales, Mount Morgan and Gunpowder, Queensland. Mount Lyell, Tasmania, Kanmantoo, South Australia, Tennant Creek, Northern Territory and Tarago, New South Wales.

**Crude oil.** Recent exploration and development activity indicates that Australia has significant reserves of crude oil and that additional reserves may be discovered in the near future as exploration activity finds further drilling prospects, particularly in the off-shore areas. The Moonie and Alton fields in Queensland, and the Barrow Island field in Western Australia have been producing since 1964, 1966 and 1966 respectively. The Barracouta, Halibut and Kingfish fields in the Gippsland Shelf area off-shore from Victoria commenced production in 1969, 1970 and 1971 respectively. At the end of 1972, proved reserves in Australia were estimated to be 1,536 million barrels and the recent discoveries indicate the possibility of an upward revision of this figure in the near future.

**Gold.** Australia's gold resources are heavily concentrated in Western Australia, mainly in the Kalgoorlie-Coolgardie area, but small deposits of gold-bearing ore occur in all States. In addition, gold is commonly obtained as a by-product of other mining activities, particularly copper mining. Economic gold ore reserves at Kalgoorlie were estimated at 4.8 million tons in late 1972.

**Iron ore.** Very extensive deposits of iron ore have been discovered, establishing Australia as one of the most important iron ore provinces in the world. The largest deposits are located in the Hamersley and Ophthalmia Ranges in the Pilbara region of north-west Western Australia. Other commercially important deposits of iron ore are situated in the Savage River area of Tasmania, in the Middleback Ranges of South Australia, in the Mount Goldsworthy, Yampi Sound, Koolyanobbing, and Weld Range areas in Western Australia, and at Frances Creek in the Northern Territory. These deposits are adequate to supply the estimated needs of the Australian iron and steel industry far into the future, as well as providing a large export availability. Total Australian reserves with an iron content greater than 55 per cent are estimated to be at least 20,000 million tons.

**Lead-zinc.** Australia has been a major producer of lead and zinc since the discovery of ore at Broken Hill, New South Wales in 1883. Measured reserves of lead-zinc ore at Broken Hill are currently 6 million tons assaying 11.7 per cent lead and 9.8 per cent zinc; 6.7 million tons assaying 9.3 per cent lead, of which 6.2 million tons also assays 14 per cent zinc and, 4.5 million tons assaying 13.1 per cent lead and 10 per cent zinc. Reserves at another major producing mine, Mount Isa in Queensland, are 56 million tons assaying 7 per cent lead and 6 per cent zinc. Preparations are now being made to start production from a new mine, the Hilton, near Mount Isa with reserves of 35.0 million tons of ore, assaying 8 per cent lead and 10 per cent zinc. The capacity of the mine at Rosebery in Tasmania (reserves of 9.5 million tons, 6 per cent lead and 17 per cent zinc) is being increased. Development of the McArthur River deposit in Northern Territory (reserves of 200 million tons, 4 per cent lead and 9 per cent zinc) is dependent on the solution of complex metallurgical problems. A deposit discovered near Tarago, near Goulburn, N.S.W. will commence production in 1976; reserves are estimated at 7 million tons assaying 3.3 per cent lead, 9.4 per cent zinc and 2.9 per cent copper. Lead and zinc concentrates are being produced with copper concentrates at Cobar, New South Wales.

**Manganese.** Australia's known reserves of manganese, which is highly important for the iron and steel industry, are in excess of domestic requirements, and exports have continued at a high level. The principal deposits currently being worked are in the Pilbara area of Western Australia and on Groote Eylandt in the Gulf of Carpentaria. Reserves on Groote Eylandt are substantial and supplied 90 per cent of Australian production in 1971.

**Mineral sands.** Ores of titanium (rutile and ilmenite), zirconium (zircon) and thorium (monazite) occur in mineral sands over extensive areas of the north and central coasts of New South Wales, the

south and central coasts of Queensland, and the south-western coast of Western Australia and at Eneabba, 170 miles north of Perth. Resources are large by world standards and easily workable. Australia's reserves of rutile and zircon represent a large proportion of the world's reserves of these minerals. In 1971 Australia was responsible for about 95 per cent of the world's supplies of rutile, 87 per cent of zircon, 50 per cent of monazite and 25 per cent of ilmenite.

*Natural gas.* Significant discoveries of natural gas have been made throughout Australia, the most notable being the Barracouta, Marlin, and Snapper fields; Gippsland shelf combined reserves are 10 million million cubic feet. About 20 fields in the Cooper Basin in South Australia have total recoverable reserves in excess of 3.4 million million cubic feet, and numerous small fields in the Roma, Surat and Rolleston areas in Queensland have combined reserves of 212 thousand million cubic feet. Commercial production is being undertaken from the Barracouta, Marlin, Gidgealpa, Moomba, Dongara, Mondarra and Roma fields. Reserves in the Dongara, Mondarra, Walyering, Gingin and Yardarino gasfields in Western Australia are about 500 thousand million cubic feet. Total daily gas production at the end of 1972 was of the order of 314 million cubic feet. Reserves of 1.6 million million cubic feet at Mereenie and Palm Valley in the Northern Territory are not yet being exploited. Large reserves of natural gas discovered on the north west continental shelf at Petrel, Scott Reef, North Rankin, Rankin, Angel, Goodwyn and Eaglehawk are estimated to contain in excess of 20 million million cubic feet. At the end of 1972, the total reserves of natural gas in Australia were estimated at about 40 million million cubic feet.

*Natural gas liquids.* The production of natural gas liquids in association with natural gas is becoming an important facet of Australian petroleum production. Natural gas liquids, also known as condensate, are produced in association with gas from the Barracouta, Marlin, Gidgealpa, Moomba and Dongara/Mondarra fields and to a lesser degree at Roma. Natural gas liquids from Barracouta and Marlin are separated from the gas at the Longford gas and crude oil stabilisation plant and piped to Westernport Bay for shipment to local and export markets. A liquids pipeline from the Gidgealpa-Moomba gasfield to Adelaide is planned. The liquids produced at Roma, because of their small quantity, are mainly used as a fuel on the producing fields. The condensate content of Northwest Shelf gas is generally higher than that of other Australian gas. At the end of 1972, reserves of natural gas liquids in Australia, were estimated to be in excess of 620 million barrels.

*Nickel.* In the Kalgoorlie-Widgiemooltha area of Western Australia more than 21 nickel sulphide ore bodies have been found since the original discovery of nickel ores was made at Kambalda in 1966. Total ore reserves in the Kalgoorlie area are more than 27 million tons, averaging 3.0 per cent nickel. Other large but low-grade ore bodies have been found between Leonora and Wiluna; the largest of these is Mount Keith where ore reserves are estimated to be 330 million tons averaging 0.6 per cent nickel. In the Leonora-Wiluna area at Agnew the ore body is estimated to contain at least 33 million tons of ore averaging 2.2 per cent nickel.

A nickel refinery has been built at Kwinana, Western Australia, with an annual capacity of 15,000 tons which is expected to be expanded to 20,000 tons. A smelter built at Kalgoorlie with an annual capacity of 200,000 tons of nickel concentrate commenced operation in 1973.

Lateritic nickel deposits have been discovered at Greenvale in Queensland where production is expected to commence in 1974. Other large, but at present uneconomic, deposits of this type have been found at Wingellina, near the border of South Australia and Western Australia, at the Ora Banda district north-west of Kalgoorlie and at Marlborough in Queensland.

*Phosphate.* Accelerated search for phosphate rock commencing in late 1964 resulted in the discovery of major deposits in north-west Queensland and in the Northern Territory with reserves exceeding 2,600 million tons. It is unlikely that these will be developed in the immediate future.

*Tin.* The main deposits of tin now being exploited are in the Herberton field inland from Cairns, Queensland; north-west and north-east Tasmania; in the Pilbara region and in the south-west of Western Australia; and at Gibsonvale, Ardlathan and in the New England area, in New South Wales. As the result of exploration and expansion of known deposits in recent years, Australia is now a net exporter of this metal.

*Tungsten.* The main deposits of tungsten ores are in north-eastern Tasmania (wolfram) and on King Island (scheelite). Australia's own requirements are small, and production is principally for export. Australian production of tungsten concentrates could be doubled by the mid-1970's when the planned increases in production at King Island take effect.

*Uranium.* Export from Nabarlek (Northern Territory) and Mary Kathleen (Queensland) of 3,340 short tons of uranium oxide has been arranged for delivery between 1975 and 1985, and 1,000 short tons from Nabarlek from 1976-1983. During 1972, four large deposits of uranium ore have been discovered in the East Alligator River area of the Northern Territory. Preliminary estimates suggest that two of the deposits could each contain more than the total of previously known uranium reserves in Australia. Further work is being carried out at Nabarlek, Koongarra (Jim Jim), Ranger 1 and



Jabiluka; preliminary estimates suggest that at least 115,000 short tons of uranium oxide will be proven in these deposits. Export contracts for uranium oxide from Ranger 1 are for 1,300 short tons from 1977-1982, and 2,000 short tons from 1977-1986. Discovery of a large deposit at Yeelirrie near Wiluna, Western Australia was announced in 1971; reserves are estimated at the equivalent of 50,000 short tons of uranium oxide. Other important areas of exploration are Mount Painter and Lake Frome in South Australia, South Alligator River in the Northern Territory and the Westmoreland and Mount Isa areas of Queensland.

### Administration

All mineral rights in Australia are vested in the Crown except on land which was granted before the Crown began to reserve mineral rights. In practice these private mineral rights are important only in the New South Wales coalfields. In the States, rights are held by the State Governments and in the Territories of the Commonwealth these rights are vested in the Commonwealth Government. The Commonwealth Government is able also to influence over-all development and production activity in the mineral industry by virtue of its statutory powers with respect to international trade, customs and excise, taxation, and loan raisings. Certain specially formed bodies such as the Joint Coal Board and the Australian Atomic Energy Commission have been given administrative responsibility in defined areas.

#### Control of mining

Each State or Territory in the Commonwealth has its own mining Acts or Ordinances and regulations governing the prospecting for and working of mineral deposits. Before the commencement of the Acts mentioned in the next paragraph these Acts, etc., were similar in principle, but different in detail. They all made provision for miner's rights to prospect and for small mining leases for mineral production. The principles embodied in these Acts, etc., were established many years ago when mining operations were generally small scale and labour-intensive. Although amendments had been enacted to modernise the legislation, it was generally inadequate for the large scale capital-intensive operations often involved with modern mineral development. For this reason a large enterprise may take the course of acquiring mining titles by negotiation with the appropriate Minister for Mines and having the agreed terms and conditions embodied in an Act of the State Parliament. This method of acquisition has been used in several cases where the leasing company undertook an obligation (such as the erection of a large treatment works) in return for leases over large areas for a long period, and has become more common in recent years (e.g. iron ore in Western Australia, coal and bauxite in Queensland, bauxite in the Northern Territory).

Two States have passed and brought into operation new mining acts, i.e. *The Queensland Mining Act of 1968 to 1971* which commenced on 1 January 1972 and *The South Australian Mining Act, 1971* which commenced on 3 July 1972. These Acts are simpler and more suited to modern conditions than the mining acts which they replaced. Western Australia and New South Wales introduced Bills for new mining acts into their respective Parliaments in 1972 but these bills had not been passed at the end of 1972.

AREAS OCCUPIED UNDER MINING ACTS AND ORDINANCES<sup>(a)</sup>  
STATES AND NORTHERN TERRITORY, 31 DECEMBER 1968 TO 1972  
(<sup>0</sup>000 acres)

Year	N.S.W. <sup>(b)</sup>	Vic.	Qld <sup>(c)</sup>	S.A. <sup>(b)</sup>	W.A.	Tas.	N.T. <sup>(b)</sup>	Total
1968	1,146	596	2,618	99	705	66	43	5,273
1969	1,397	608	2,607	97	1,471	54	93	6,327
1970	1,495	2,301	3,568	121	5,512	60	97	13,154
1971	1,148	1,231	3,926	130	7,820	62	101	14,418
1972	1,620	329	3,471	145	4,254	64	119	10,002

(a) Excludes areas held under special arrangements; see following text.

(b) At 30 June.

(c) Excludes lands held under miners' rights and dredging claims.

#### Control of exploration

This section refers in general to the exploration for all types of mineral deposits in Australia. Additional information relating to the search for petroleum is set out in the following section.

As a result of the introduction of large-scale modern prospecting methods (particularly air-borne prospecting), the small prospecting areas referred to in the previous section were found to be unsuitable in some instances, and steps have been taken in the States and Territories to ensure the availability of large areas for prospecting by interested persons. Large areas may be made available by provision within the Mining Acts or Ordinances for the issue of authorities to prospect over an area defined by a written agreement which also sets out provisions as to the amount of money to be spent, methods of prospecting, tenure of the agreement, etc.

The tenure of such areas is limited, usually to one or two years only, and, if renewed for a further period, is only over an area selected from the larger area as a result of work done during the life of the initial agreement. It does not give the holder any rights over, or authorities to prospect on, land already held under a mining title within the agreed area. Unless specifically stated in an agreement, the discovery of minerals, whether inside or outside an area covered by an authority to prospect, gives the discoverer no legal rights except the right to apply for a mining lease over the area in which the discovery was made. Suitable prospects are converted to mining tenements by making application for lease under the appropriate mining Act.

### Control of petroleum exploration

*On-shore.* In Australia all petroleum is the property of the Crown. Consequently, full control of petroleum mining rights is vested in the Government or Administration of each State or Territory. Any company, organisation or individual proposing to undertake petroleum exploration or development must first satisfy the Government concerned that the necessary financial and technological resources are available to carry out the operation.

There are three main types of petroleum titles:

- (a) the permit, covering initial geological, geophysical and exploration drilling;
- (b) the licence (in Victoria only), which covers detailed surveys and drilling; and
- (c) the lease, which covers development operations and production.

Further details of the petroleum legislation are given in Year Book No. 55, pages 996-7. The States of Western Australia and South Australia recently issued some revisions to their on-shore legislation, for details of which direct reference should be made to the State concerned.

*Off-shore.* The *Petroleum (Submerged Lands) Act 1967-1968* is the instrument whereby the control and safeguarding of the exploration and exploitation of petroleum resources on the territorial sea-bed and on the continental shelf are assured. Complementary legislation has been passed by each State Government and by the Federal Government.

The legislation provides for a two-stage system of titles: the exploration permit, which covers all forms of exploration including drilling, and the production licence, which covers development and exploration. Royalty is generally shared between State and Federal Governments on a 60 : 40 basis; however, overriding royalty is payable to the State under certain conditions. Mineral royalty receipts of governments under these Acts are included in the table on page 919. For full details of the off-shore legislation, see Year Book No. 55, pages 997-8.

The table following shows details of areas occupied under both on-shore and off-shore petroleum exploration and development titles at 31 December 1970, 1971 and 1972.

AREAS OCCUPIED UNDER PETROLEUM EXPLORATION AND DEVELOPMENT  
TITLES: STATES AND NORTHERN TERRITORY, 31 DECEMBER 1970 TO 1972

Year	N.S.W.	Vic.	Qld	S.A.(a)	W.A.	Tas.	N.T.(a)	Total
ON-SHORE AREAS (square miles)								
1970	87,886	25,308	506,118	233,526	n.a.(b)	639	61,769	n.a.
1971	75,732	18,491	397,484	219,966	n.a.(b)	230	57,734	n.a.
1972	33,486	19,862	337,074	218,992	n.a.(b)	..	57,734	n.a.
OFF-SHORE AREAS (5 minute blocks) (c)								
1970	643	1,189	2,918	3,425	8,808	2,314	3,626	22,923
1971	782	1,178	2,918	3,089	8,727	1,703	3,534	21,931
1972	503	1,178	2,918	3,089	10,171	1,498	3,535	22,892

(a) At 30 June. (b) Available only in terms of 5 minute blocks of which there were 5,517 at 31 December 1970, 6,510 at 31 December 1971 and 8,036 at 31 December 1972. (c) Area bounded by 5 minutes of latitude and 5 minutes of longitude; figures include partial blocks.

### Mineral royalties

The collection by governments of royalties for the production of minerals within their area of authority is an internationally accepted practice. In Australia the responsibility for mineral royalties is largely a State concern, and all States currently collect some form of mineral royalty payments. In the past most States have relied on an established system of standard rates which were uniform for all producers of any particular mineral in the State concerned. These charges were either a fixed monetary amount per ton (e.g. 5c per ton on gypsum mined in New South Wales) or an *ad valorem* royalty (e.g. 1.5 per cent of gross value of gold produced in New South Wales).

In recent years there has been an important basic change in the system of establishing royalty commitments, and it is now quite common for State Governments to negotiate special royalty rates with companies which are seeking mineral leases for large scale developments. These royalty rates may vary, depending on whether production is for export or for domestic processing. The rates for a particular mineral may also vary between producers. Important examples of this type of royalty agreement are the iron ore development agreements in Western Australia and coal development agreements in Queensland. Mineral royalties received by Governments in recent years are shown in the table below.

MINERAL ROYALTY RECEIPTS: GOVERNMENTS, 1967-68 TO 1971-72  
(\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
New South Wales(a)	11,685	9,795	13,558	17,819	10,237
Victoria(b)	663	(c)687	(c)2,736	(c)12,239	(c)16,875
Queensland(a)	1,844	1,688	3,039	5,483	3,805
South Australia	1,037	1,254	1,557	1,798	1,821
Western Australia	6,238	11,001	15,700	22,347	25,247
Tasmania(d)	87	(e)251	(e)424	(e)410	(e)489
Northern Territory	291	283	449	431	634
Commonwealth	9	(c)11	(c)492	(c)5,024	(c)7,567
Total	21,853	24,971	37,953	65,552	66,676

(a) Includes royalty on sand and gravel from Crown lands. (b) Includes royalty on brown coal paid by State Electricity Commission. (c) From 1968-69 includes royalties received under the *Petroleum (Submerged Lands) Act*, 1967-68. (d) Includes rent and fees from mineral lands. (e) From 1968-69 includes royalties on iron ore.

### Control of exports

The Commonwealth Government maintains export controls over certain metals, petroleum and petroleum products and all raw and semi-processed minerals. These controls are administered under the authority of the Customs (Prohibited Exports) Regulations as amended from time to time by Statutory Rules. The Commonwealth authorities having jurisdiction over such exports are set out below together with listings of the goods subject to control. A clearance to export is needed in each case.

*Department of Minerals and Energy*—An amendment to the Customs (Prohibited Exports) Regulations on 22 February 1973 (Statutory Rule No. 39 of 1973) provided that the exportation from Australia of the following goods is prohibited unless approval in writing is issued by the Minister for Minerals and Energy or by an authorised person.

- (a) ores containing copper or tin, whether or not they have been subjected to processing or treatment; mineral or metallic substances produced in the course of processing or treatment of those ores; copper anodes, copper cathodes, copper ingots, copper rods, copper scrap and copper refinery shapes in the form of ingots, wire bars, billets, cakes, rolling blocks or ingot bars; copper alloys in the form of ingots, billets, cakes, rolling blocks or ingot bars and copper alloy scrap; refined tin in the form of ingots or in any other refinery form;
- (b) alumina;
- (c) natural gas, whether liquefied or not, liquefied petroleum gas, and condensate;
- (d) all other minerals including those other minerals that have been subjected to processing or treatment; substances produced in the course of processing or treatment of those other minerals but not including refined products obtained by or from processing or treatment of those other minerals and goods into which products, whether refined or not, obtained by or from processing or treatment of those other minerals have been converted.

The amendment of 22 February 1973 to the regulations extends the export controls which have functioned for some time over a limited number of metals and minerals, including copper and tin



metals and various specified materials containing those metals, iron ore, manganese ore, mineral sands and natural gas, by bringing within the scope of the export controls all minerals either in raw or semi-processed form.

In addition, previously existing regulations controlling the export of metals and minerals of atomic energy significance continue, viz. minerals containing uranium and thorium, uranium, thorium, beryllium and lithium metals, compounds and alloys; hafnium-free zirconium metal, alloys and compounds, nickel metal in certain forms.

*Department of Primary Industry*—phosphate rock, phosphate and superphosphate, and fertilisers containing phosphate or superphosphate.

### Joint Coal Board

The Joint Coal Board was established in 1946 under joint legislation of the Commonwealth and of the State of New South Wales to carry out special administrative functions in regard to the New South Wales black coal mining industry. A summary of these functions is given below.

- (i) To ensure that coal is produced in the State of New South Wales in such quantities and with such regularity as will meet requirements throughout Australia and in trade with other countries;
- (ii) to ensure that the coal resources of the State are conserved, developed, worked and used to the best advantage in the public interest;
- (iii) to ensure that coal produced in the State is distributed and used in such manner, quantities, classes and grades, and at such prices as are calculated best to serve the public interest and secure the economical use of coal and the maintenance of essential services and industrial activities; and
- (iv) to promote the welfare of workers engaged in the coal industry in the State.

### Australian Atomic Energy Commission

During 1953, Commonwealth legislation was enacted to set up an Atomic Energy Commission which is responsible, in an overall sense, for the production and utilisation of uranium in Australia. This Act, the *Atomic Energy Act 1953*, superseded the *Atomic Energy (Control of Materials) Act 1946*, but retains a provision of that Act which provides for the control of substances which could be used for production or use of atomic energy.

The functions of the Commission fall under two main headings. Firstly, it is responsible for undertaking and encouraging the search for and mining of uranium and is empowered to co-operate with the appropriate authorities of the States in connection with these and related matters. Secondly it is authorised to develop the practical uses of atomic energy by constructing and operating plant for this purpose, carrying out research and generally fostering the advancement of atomic energy technology. The Commission operates under the direction of the Minister for Minerals and Energy.

## Government assistance

The Commonwealth Government and the various State Governments provide assistance to the mineral industry in a variety of ways. The main forms of assistance are discussed below.

### Commonwealth Government Assistance

Assistance provided by the Commonwealth Government takes the form of income taxation concessions, subsidies, bounties, and technical assistance mainly through the work of the Bureau of Mineral Resources and the Commonwealth Scientific and Industrial Research Organization. A table showing direct Commonwealth Government payments to sectors of the mineral industry is included on page 923.

*Income taxation concessions.* One-fifth of the net income derived from mining for prescribed minerals in Australia or Papua New Guinea is exempt from tax. Principal minerals to which this concession applies are as follows: asbestos, bauxite, radio-active ores, rutile and zircon; and ores of copper, nickel and tin.

Income derived from mining principally for gold in Australia or Papua New Guinea is exempt from tax. The exemption is also available in respect of income derived from mining principally for gold and copper if the value of the gold obtained is not less than 40 per cent of the value of the total output.

Dividends paid wholly and exclusively out of exempt mining income are also exempt from tax.

One third of call moneys paid by resident and non-resident investors on non-redeemable shares in a company, whose principal business is mining or prospecting for minerals in Australia or Papua New Guinea, is allowable as a deduction from the investors' assessable income. Where the shares in such a company are issued after 9 May 1968, the deduction is dependent upon the company lodging a declaration that the call moneys have been, or will be, expended exclusively on the search for minerals (including petroleum) obtainable by mining.

Other valuable assistance has been given in the form of certain taxation concessions to encourage the search for petroleum and other minerals. Resident investors are permitted, for tax purposes, to deduct from their assessable income all application, allotment and call moneys paid for shares issued by petroleum exploration companies or companies engaged in prospecting or mining for other minerals obtainable by mining. These deductions are allowable only if the company elects to forgo an equivalent amount of the special deductions for capital expenditure to which it would otherwise be entitled. Many companies engaged in exploring for petroleum and other minerals have elected to pass on this benefit to their shareholders.

Special deductions for capital expenditure incurred in the discovery and mining of petroleum are allowable to a company deriving income from the sale of petroleum, and products of that petroleum, mined by the company in Australia or Papua New Guinea. A company is entitled to these deductions only when it produces Australian petroleum in commercial quantities. The general effect of the deductions is to free the proceeds from the sale of Australian or Papua New Guinean petroleum and its products from tax until all allowable capital expenditure has been fully recouped. Dividends paid wholly and exclusively out of profits so freed from tax are exempt.

Capital expenditure allowable to petroleum exploration companies includes, broadly, the cost of exploratory surveys, drilling and well-head plant, access roads and expenditure on housing and welfare.

A company mining or prospecting for minerals other than petroleum and gold may also be allowed special deductions for capital expenditure. Broadly, allowable capital expenditure includes expenditure on exploration and prospecting, preparation of a site for extractive mining operations, buildings, other improvements and plant necessary for those operations, access roads, certain treatment plant and housing and welfare.

The allowable capital expenditure of a general mining company may be deducted over the life of the mine, or twenty-five years, whichever is the lesser. Alternatively, the mine owner may elect to have the allowable capital expenditure deducted in the year it is incurred or, where appropriations have been made for such expenditure to be incurred in the following year, the deduction may be allowed in the year of the appropriation. Annual deductions for depreciation on mining plant may be allowed in lieu of spreading the cost over the life of the mine. Expenditure on housing and welfare may, at the option of the mine owner, be allowed over the life of the mine, or five years.

Special deductions are allowable for capital expenditure incurred on certain transport facilities used primarily and principally in relation to minerals mined in Australia, for the transport of raw minerals and certain specified products obtained from the processing of such minerals, or for transporting petroleum between the oil or gas field and a refinery or other terminal. The special deduction applies to expenditure incurred on a railway, road, pipe-line or similar transport facility. Allowable expenditure on transport facilities is deductible in equal annual instalments over a period of ten years.

*Petroleum search subsidy.* In 1957 the Commonwealth Government introduced the *Petroleum Search Subsidy Act* 1957 whereby stratigraphic drilling operations were subsidised to the extent of 50 per cent of cost. An amendment in 1959 widened the scope of operations for which subsidy was offered to include all types of geophysical surveys and off-structure drilling.

Subsidy payments under the Act for the years 1968 to 1972 are shown in the table on page 923. Various amendments to the Act and Regulations altered the rate of subsidy and the type of operations to which a subsidy is applicable. On-shore exploration drilling is subsidised at the rate of 30 per cent of approved costs and on-shore geophysical operations at a rate of 50 per cent. All similar off-shore operations are subsidised at a rate dependent upon the Australian financial contribution to the operation, the maximum rate being 30 per cent for operations wholly financed by Australian companies. Details of amendments are given on page 1001 of Year Book No. 55. The 1969 amendment provided for the payment of subsidy for approved operations completed before 30 June 1974. In May 1973 the Minister for Minerals and Energy announced the termination of the subsidy scheme and that operations extending beyond or commencing after 30 June 1974 would not be eligible for subsidy.

*Pricing of Australian crude oil.* Early in 1965 the Tariff Board conducted a public inquiry to determine an appropriate price for Australian crude oil, having regard to the Commonwealth Government's desire to encourage the search for oil and the consequent need to offer sufficient incentive to exploration companies. At the same time the Government indicated that it was anxious to prevent or minimise increased costs of petroleum products to consumers and to ensure that refineries using Australian crude oil were not detrimentally affected in relation to other refineries.

Evidence was heard from oil exploration, marketing and refining interests, government officials, coal and power interests, and major users of refined petroleum products. The Tariff Board recommended at that time that Moonie crude oil should be valued at \$2.69 a barrel at the nearest refinery centre, which included a variable differential related to the quality of the oil and an incentive of 22.4 cents per barrel. The Government adopted the Tariff Board's recommendations, and raised the incentive margin to 67 Australian cents a barrel; this margin to apply to all Australian crude oil producers.

To ensure that indigenous crude oil is used to the maximum extent in Australian refineries, the Government also adopted the Tariff Board's recommendation to impose penal import duties of 0.8 cents a gallon on crude oil and 2.4 cents a gallon on motor spirit to be paid by the companies which do not take their share of local crude oil. The share of local crude to be taken will be based on the importer's share of total imports of refinery feedstock or refined products or both.

Under these arrangements the price of Moonie crude is \$3.14 a barrel delivered Brisbane; and Barrow Island field when it commenced production in April 1967 was \$3.24 a barrel delivered Kwinana. This pricing structure was to remain operative until 17 September 1970.

However, the discovery of very large crude oil reserves in the Gippsland Shelf fields revealed that this pricing structure could result in the Australian consumer paying more for indigenous petroleum products than for similar products refined from imported crude oils. Following negotiations with the Commonwealth Government the Gippsland Shelf operators agreed to forgo the \$0.67 a barrel incentive, plus a further \$0.05 per barrel. This applied from commencement of production in October 1969 to 17 September 1970. As from 18 September 1970, the price of all Australian crude oils has been based on 'import parity' as at 10 October 1968, the date on which the new arrangements were announced by the Prime Minister in Parliament. This new pricing structure is also for a 5 year period.

Under this agreement the Gippsland crude oil is priced in the following manner:

	<i>per barrel</i> \$
Weighted average posted price as at 10 October 1968 of principal crudes imported into Australia . . . . .	1.62
less weighted average discounts as at 10 October 1968 . . . . .	0.26
	<hr/> 1.36
plus weighted average overseas freights as at 10 October 1968 . . . . .	0.46
Wharfage and other charges as at 10 October 1968 . . . . .	0.07
	<hr/> 1.89
less a deduction for coastal freight . . . . .	0.09
	<hr/> 1.80

To this the quality differential of approximately \$0.26 per barrel is added. The quality differential varies according to changes which occur in the quality of the oil produced.

Moonie crude oil on the same basis, for the five-year period will be \$2.15 per barrel f.o.b. Brisbane, since the coastal freight deduction of 9 cents per barrel does not apply.

Barrow Island crude will be the basic \$1.89 per barrel plus a quality differential of 34 cents, giving the total of \$2.23 per barrel f.o.b. Kwinana.

The Government has announced that the absorption of Australian crude oil by Australian refineries will be Government policy until September 1980. The allocations to refining and marketing companies are now based on the sales volume of certain products, and the associated penal duties on imports made by companies not taking up their allocations have been increased to 7.5 cents per gallon on motor spirit, 5 cents per gallon on other refined products and 2 cents per gallon on crude oil.

The Government has also announced that, should the production of Australian crude oil exceed the capacity of the refiners to absorb indigenous crude, the available market will be shared between all producing companies on a formula based on the reserves of each company. Export of the excess crude oil will be permitted.

*Assistance to the gold-mining industry.* Assistance to the gold-mining industry by subsidy was introduced at a time of rising costs in the industry and fixed official world price for gold. Because many producers were faced with the likelihood of closing down, the Government decided to subsidise marginal producers in Australia and Papua New Guinea. Under the *Gold-Mining Industry Assistance Act* 1954 a producer, the value of whose gold output exceeded 50 per cent of the total value of his mine output, was eligible for assistance, subject to certain conditions, on the production of gold



from 1 July 1954. The assistance scheme has been reviewed on a number of occasions since the Act was originally passed, and some liberalisations have been approved, including increases in the rates of subsidy payable authorised in amendments passed in 1957, 1959, 1965 and 1972.

Under the Act as it now stands the subsidy payable to small producers whose annual deliveries do not exceed 500 fine oz is \$6 per fine oz, irrespective of cost of production. For large producers, subject to certain provisions, the rate of subsidy payable is an amount equal to three-quarters of the excess of the average cost of production over \$27 per fine oz, with a maximum amount of subsidy of \$12 per fine oz. A producer whose deliveries during the year exceed 500 fine oz may elect to be treated as a small producer. In this case the subsidy rate payable per fine oz on total deliveries is \$6 reduced by 1c for each fine oz by which deliveries exceed 500 fine oz. The benefit under this provision terminates when deliveries in a year reach 1,100 fine oz. Where a producer receives an amount in excess of \$31.25 per fine oz as a result of sales on overseas premium markets or otherwise, the subsidy payable is, with effect from 1 January 1972, reduced by fifty per cent of the amount of the excess. Prior to 1 January 1972 subsidy was reduced by seventy-five per cent of the excess.

Payments under the Act will apply to production until 30 June 1975. The amounts paid to gold producers in the various States and Territories of Australia in each of the years 1968 to 1972 are shown in the table below.

*Assistance to the producers of sulphuric acid and iron pyrites.* The *Sulphuric Acid Bounty Act* 1954–1971 and the *Pyrites Bounty Act* 1960–1971 expired on 31 May 1972. The Acts provided for payment of bounty on sulphuric acid produced from prescribed Australian materials, and to producers of iron pyrites. Payments under these Acts for the years 1968 to 1972 are shown in the table below.

*Payments to producers of phosphate fertilisers.* The *Phosphate Fertilisers Bounty Act* 1963–1971 provides for a bounty to be paid on superphosphate and ammonium phosphate manufactured and used in Australia as a fertiliser. (This includes approved trace elements, compounds or substances when added to superphosphate). Bounty is payable on the soluble content of phosphorus pentoxide. A standard grade of superphosphate containing between 19.5 and 20.5 per cent soluble content of phosphorus pentoxide qualifies for full bounty of \$12 per ton. Outside this range, bounty is payable at \$60 per ton of contained phosphorus pentoxide. The intention of this Act is to assist consumers of phosphate fertilisers (primary producers). The Act is due to expire on 31 December 1974. Payments under the Act, for the years 1968 to 1972, are set out in the following table.

**COMMONWEALTH GOVERNMENT PAYMENTS TO THE MINERAL INDUSTRY  
AND TO THE MANUFACTURING INDUSTRY FOR PRODUCTS OF MINERAL  
ORIGIN; AUSTRALIA, 1968 TO 1972**  
(\$'000)

Year	Petroleum exploration (a)	Gold mining(b)	Pyrites mining(c)	Sulphuric acid production (d)	Phosphate fertiliser production (e)
1968 . . .	13,805	2,817	..	1,279	24,907
1969 . . .	14,911	1,077	..	988	31,665
1970 . . .	11,237	3,278	90	740	45,820
1971 . . .	8,468	2,162	568	489	40,815
1972 . . .	8,422	1,185	962	527	49,137

(a) *Petroleum Search Subsidy Act* 1959–69. Includes payments in Papua New Guinea; see also the table on page 946. (b) *Gold-Mining Industry Assistance Act* 1954–72. Includes payments in Papua New Guinea. (c) *Pyrites Bounty Act* 1960–1971. This Act expired on 31 May 1972. (d) *Sulphuric Acid Bounty Act* 1954–1971. This Act expired on 31 May 1972. (e) *Phosphate Fertilisers Bounty Act* 1963–1971.

*Bureau of Mineral Resources, Geology and Geophysics.* The functions of the Bureau are as follows:

- (i) as a primary function, to obtain, study, publish and provide basic geological and geophysical information necessary for the exploration and development of the nation's mineral resources; this to be done where appropriate in co-operation with State and Territorial authorities;
- (ii) to undertake experimental studies and research into geology and geophysics in order to support the function of obtaining basic information;
- (iii) to make basic investigations of the earth's magnetic and gravitational fields and in seismology and vulcanology;

- (iv) to complement the work of the State and Territorial authorities by undertaking geological and geophysical investigations into the occurrence and distribution of underground water;
- (v) to undertake geological and geophysical investigations on behalf of other Commonwealth Departments and authorities including the provision of resident staff by arrangement with the Territories;
- (vi) to obtain basic information on, and review the mineral resources of the Commonwealth and its Territories; to study the various sectors of the mineral industry both in the national and international spheres; to publish and provide information about the mineral industry;
- (vii) to undertake such investigations in mining engineering and petroleum technology as are relevant to (i) and (vi) above;
- (viii) to prepare advice for Government on the mineral industry, including the exploration and development of mineral resources in the national interest;
- (ix) when directed by Government, to administer schemes for the assistance of sectors of the mineral industry and to undertake special mineral projects.

The Bureau comprises five branches under the Director: Operations, Mineral Resources, Geological, Geophysical, and Petroleum Exploration. The Operations Branch consists of three sections, Planning and Co-ordination, Publications and Information, and Administrative. It carries out central office functions, including planning and control of program, assessment of results, co-ordination of activities, liaison, and distribution of information. The Mineral Resources Branch comprises the sections Mineral Economics, Mining Engineering, and Petroleum Technology, and is concerned largely with those aspects of the Bureau's work which involve studies of the mineral industry as a whole, and the preparation of advice and reviews for the Government, industry and the public. The Geological and Geophysical Branches are responsible for the principal field activities of the Bureau, and the operation of observatories, while the Petroleum Exploration Branch is concerned with the administration of the *Petroleum Search Subsidy Act* 1959–1969 and the assessment of sedimentary basins in Australia and its Territories. The establishment of the Bureau is 637 officers (at 30 June 1972), of whom 285 were professional. The budget for the financial year 1972–73 was \$17.75 million, of which \$8.6 million was provided for payment under the *Petroleum Search Subsidy Act* 1959–1969.

The Bureau maintains laboratories in Canberra and Darwin which are engaged on geochemical, geochronological and petroleum technological studies and basic research into the design and testing of geophysical equipment. The Bureau also maintains geophysical observatories at Toolangi, Mundaring, Port Moresby, Mawson (Antarctica), and Macquarie Island. The geophysical observatories are engaged in magnetic, ionospheric, and seismic investigations and are base stations for field operations.

#### State Government assistance

In addition to free assays and determinations of rocks and minerals carried out for prospectors by the Mines Departments of the States and Territories, technical officers of these departments provide advice to the mining and allied industries where required, carry out field examinations of mining prospects, advise on exploration and development, select sites for water supply, and in general give a free technical service to the mining industry.

*New South Wales.* The State Mines Department renders scientific, technical and financial assistance to the mining industry. Grants are made to cover up to half the cost of prospecting and drilling operations. These grants are repayable if sufficient pay minerals are discovered or if certain other conditions are met. Loans at low interest rates may be made to prospectors and miners for the purchase of plant and machinery. A quantity of equipment is also available for hire in several localities. The Department has itself undertaken a program of contract drilling to investigate the existence of mineral deposits in the State (including the testing and proving of coal resources). Expenditure on financial assistance in 1971–72 amounted to \$634,236 including \$214,923 on the Department's own drilling program.

*Victoria.* The Mines Department conducts geological and mineral surveys and produces geological maps and issues scientific and technical reports thereon. Extensive rotary, percussion and auger drilling operations are carried out and in conjunction with these, sedimentary basin studies are made to evaluate petroleum, mineral and groundwater potential. A comprehensive library and a geological museum are maintained and a core library retains cores and cuttings from drilling operations. The administration of petroleum and pipeline legislation ensures the conduct of all petroleum exploration and production operations by private operators, onshore and offshore, in a safe and effective manner. Technical and drilling assistance and loans or grants are available for mineral exploration and prospecting and for approved development operations. Six stamp batteries provide an ore crushing service to enable test crushings to be made at nominal cost. Information is available on mining law

and mineral statistics. Assays of ores, analytical services, advice on metallurgical treatments, industrial pollution and chemical problems are available together with information on the manufacture, handling and use of explosives. Financial assistance is available to municipalities to reclaim mine-damaged land, in areas where a Reclamation Committee recommends such action.

*Queensland.* The Department of Mines provides assistance to mining by way of geological services, grants for construction and maintenance of roads in mining areas, repayable advances or subsidies for mine development, hiring of equipment, and assistance to prospectors. The Department maintains a concentration plant for tin ores at Irvinebank, an assay office at Cloncurry, a battery for treatment of gold-bearing ores at Charters Towers, and diamond drilling plants in various parts of the State.

*South Australia.* The Department of Mines provides the following services and facilities to the mineral industry: (i) drilling and testing of mineral deposits, geophysical investigations, well logging, development of sub-surface water supplies for farming, pastoral, irrigation, and mining purposes; (ii) geological examination of mineral deposits, ground water supplies, dam foundation and drainage problems, and publication and issue of geological bulletins and maps. It also provides, through the Australian Mineral Development Laboratories, facilities for chemical, metallurgical, analytical and assay investigations, testing and treatment of ores and minerals, and petrographic, mineragraphic and radiometric determinations. Pilot scale metallurgical and chemical treatment plants are maintained and operated for the development of mineral extraction processes.

*Western Australia.* Prospectors receive assistance of either \$15 or \$17.50 a week according to the prospecting locality. North of the 26th parallel and within a defined area south of this, lying largely outside the agricultural areas, assistance is given to the extent of \$17.50 a week. In the remainder of the State prospectors receive \$15 a week. Provision is also made for the supply of some tools required for prospecting. There are seventeen State batteries operating intermittently throughout the goldfields for the treatment of ore from prospectors and small mine-owners at a nominal charge. A cartage subsidy is also granted to such operators sending gold and lead ores to State batteries for treatment. Provision is made for loans to mine-owners who require assistance to develop mines. The Government also has a drilling scheme, financing mine-owners on a \$1 for \$1 basis.

*Tasmania.* The Department of Mines provides financial assistance to mining lessees for the purchase of plant and machinery, for sinking, repairing or de-watering of shafts, for construction of dams and water races, for testing and proving a deposit of any mining product, for developmental work, and for diamond and other types of drilling. The Department has available for hire, percussion and diamond drills for exploration, as well as a complete plant for small shaft sinking and tunnelling. Other assistance is rendered to the industry in the form of geological and engineering advice, through ore-dressing research into metallurgical recoveries, and the selection and design of treatment plant.

*Northern Territory.* To encourage the development of the mining industry the Department of the Northern Territory operates two batteries for the treatment of ores for miners. The Tennant Creek battery will continue cyaniding the gold in accumulated tailings and is available for crushing. The Mount Wells battery is crushing mainly parcels of tin ores. Small quantities of ore containing gold, silver, lead, copper and wolfram are also crushed from time to time. The crushing charges are subsidised by the Government. In addition the Department of the Northern Territory provides cartage subsidies and financial advances to encourage miners to carry out mining operations. Assistance is also given to the mining industry by drilling encouraging prospects. Roads and water supply services are provided and maintained for mines under active development throughout the Northern Territory.

## Research

Research investigations into problems of mining, ore-search, ore-dressing and metallurgy are conducted by Government bodies, by universities, by private enterprise, and by combined efforts of these bodies. A summary of their functions follows.

### Australian Atomic Energy Commission

The Australian Atomic Energy Commission conducts research at its laboratories at Lucas Heights in Sydney on the development of nuclear power, including research on nuclear materials and on metals and ceramics used for nuclear power. Research conducted by the Commission is discussed in detail in Year Book No. 55, page 561.

### The Australian Mineral Development Laboratories

Contract research and technical consulting for the mineral and associated industries is undertaken by The Australian Mineral Development Laboratories (Amdel), at Adelaide. This organisation is controlled by a council comprising representatives of the mineral industry, the South Australian



Government and the Commonwealth Government. Extensive facilities are available in the fields of analytical chemistry, mineralogy and petrology, chemical metallurgy and mineral engineering, operations research/computer services and materials technology. Both long and short term applied research is carried out and all investigations are conducted on a strictly confidential basis. Services in the field of pollution and environmental control are also available through the recently formed Amdel group Amdel (Aspect).

### **The Baas Becking Geobiological Research Laboratory**

In 1965 the Baas Becking Geobiological Research Laboratory was established in the Bureau of Mineral Resources Building in Canberra, under the joint sponsorship of the Commonwealth Scientific and Industrial Research Organization, the Bureau of Mineral Resources, and the Australian Mineral Industries Research Association (*see* Research by private enterprise, page 927). The broad objective of the research work is to investigate the biological and chemical processes associated with the formation of mineral deposits of the stratiform type.

Emphasis is placed on investigations to establish the relationship of biological factors to the natural physico-chemical environment with particular reference to the possible role of these factors in the formation and transformation of sulphide minerals. Investigations have included the response of micro-organisms to heavy metals; biochemistry and physiology of oxidative and reductive sulphur transformations; role of organisms in the concentration of mineral elements; physico-chemistry of low-temperature mineral synthesis; and mobility of sulphides under the influence of temperature and pressure and the interaction of mineral types.

### **Bureau of Mineral Resources, Geology and Geophysics**

Mineral research by the Bureau of Mineral Resources is concerned with basic problems of mineral emplacement. Special studies are undertaken of: the sedimentary environment of potentially oil-bearing rocks; the genesis of continental and marine phosphate; the fundamental chemistry of metallic ore deposits; the structural, chemical, and stratigraphic contents of ore deposits; and geophysical interpretation by means of model testing.

For details of the functions of the Bureau of Mineral Resources, Geology and Geophysics, *see* page 923.

### **Commonwealth Scientific and Industrial Research Organization**

Mineral research by the Commonwealth Scientific and Industrial Research Organization is undertaken mainly in the Minerals Research Laboratories comprising the Divisions of Mineral Chemistry, Chemical Engineering, Mineralogy, and Mineral Physics. Major laboratories are located at Clayton (Vic.), Port Melbourne, Sydney and Perth. Current research program objectives and sub-program titles are:

- (a) *Exploration.* To improve and develop procedures for locating mineral deposits (surface geochemistry, rock geochemistry, structural analysis, geobiology, remote sensing, fuel deposits).
- (b) *Mineralisation.* To improve methods of recognizing and defining the nature and economic significance of specific types of mineralisation (nickel, chromium, acid igneous deposits, stratiform ores, ore-forming fluids, electromagnetic geophysics, field analysis, mineral structures).
- (c) *Mining and concentration.* To identify, and utilize in practice, those properties of minerals and rocks which will increase the overall efficiency of their mining, concentration and handling (mineral dressing, flotation chemistry, reactivity, non-metallics).
- (d) *Process Metallurgy.* To improve and develop methods for the economic processing of minerals and mineral products (slags, iron ores, nickel ores, ilmenite, metal refining, zinc, lead, structures and bonding, plasmas, carbon reductants, fluidisation).
- (e) *Environment.* To alleviate, or turn to economic advantage, aspects of mining minerals, processing, or minerals utilisation which may be detrimental to the environment (sulphide, electrolysis, combustion, gas cleaning, reactive carbon, sulphide roasting, nutrient cycling).
- (f) *Associated industries.* To apply the skills and expertise of the Mineral Research Laboratories to the improvement and development of industrial processes not necessarily connected with the minerals industry (polymers, pulp and paper, sugar, food).

The minerals industry provides strong support in the form of co-operative research planning, collaborative investigation of specific projects, and financial grants for appropriate developmental work.

### National Coal Research Advisory Committee

The functions of the National Coal Research Advisory Committee are to review coal research activity in Australia, to recommend priorities for further activities in this area, and to allocate special Commonwealth funds of \$260,000 per year provided for coal research projects as recommended by the committee. This amount is additional to that expended by C.S.I.R.O. and Commonwealth Departments on coal research. The major beneficiary under this scheme is the Australian Coal Industry Research Laboratories; other beneficiaries are university departments.

From 1965 to 1969 special coal research funds of \$520,000 annually were available to the committee, comprising the Commonwealth contribution of \$260,000 matching an equivalent total contribution from State Governments and coal producing and consuming industries. Beginning with the financial year 1968–69 the States and industry are independently sponsoring coal research and development according to their own individual requirements.

### University Research

The various universities in Australia carry out research into various aspects of the mineral industry such as geology, ore mineralogy and genesis, mining techniques, mineral processing, extractive metallurgy, and materials and metals technology.

### Research by private enterprise

Most large mining and smelting companies have laboratories dealing with their own individual problems. Private industry formed the Australian Mineral Industries Research Association in 1959 to provide industry with representation in the management of the Australian Mineral Development Laboratories. The Association now finances research work into geology, mining and mineral processing at Universities, C.S.I.R.O. and the Australian Mineral Development Laboratories. Membership of the Association at 30 June 1972 was: full members 57, associate members 20, registered divisions 13. Expenditure on research projects during the year 1971–72 was \$453,308.

## International relations

Because Australia is a large supplier of certain minerals to the rest of the world and because the welfare of the domestic industry depends to a large extent on the maintenance of a high level of exports, international relations are of considerable importance to the industry, and the Commonwealth Government takes an active role in international consultations and discussions relating to minerals. The most important international commitments are discussed below.

### International Tin Agreement

The First International Tin Agreement (of the post-war period) was in operation for five years from 1 July 1956 to 30 June 1961. This Agreement was subsequently replaced by the Second and Third International Tin Agreements, which came into force on 21 February 1962 and 21 March 1967, respectively. Details of these Agreements are given in Year Book No. 57, pages 911–12.

Australia has signed and ratified the Fourth International Tin Agreement which came into operation on 1 July 1971 for a period of 5 years. Australia joined the Fourth Agreement as a 'producing' (i.e. exporting) member, whereas in the past Agreements Australia's status had been that of a 'consuming' (i.e. importing) member. This stems from the fact that Australia's tin production has increased significantly over recent years making it a net exporter of tin.

The objectives of this Agreement are the same as for its predecessors. Producing countries are required to contribute to a buffer-stock-equivalent in cash or tin up to 20,000 tons of tin metal, which is used to buffer short-term fluctuations in the world market price. In the event of persistent market disequilibrium through causes beyond the ability of the buffer stock mechanism to control, the agreement also provides for the regulation of exports and stocks to stabilise the market. The main provisions of the Fourth Agreement are substantially the same as those of the Third. However, the Buffer Stock Manager, a paid Council employee charged with operating the buffer stock, has been given somewhat greater flexibility in reacting to market situations.

The International Tin Agreement is operated by the International Tin Council, which is made up of the following Governments: *Producers*—Australia, Bolivia, Indonesia, Malaysia, Nigeria (Federal Republic of), Thailand, Zaire (Republic of). *Consumers*—Austria, Belgium-Luxembourg, Bulgaria, Canada, Czechoslovakia, Denmark, France, Germany (Federal Republic of), Hungary, India, Italy, Japan, Korea (Republic of), Netherlands, Poland, Romania, Spain, Turkey, United Kingdom, Union of Soviet Socialist Republics and Yugoslavia. The producing countries hold a total of 1,000 votes, distributed so that each country receives five initial votes and an additional

number corresponding to its percentage as laid down by the Agreement. The consuming countries hold a total of 1,000 votes also distributed so that each country receives five initial votes and an additional number proportionate to tonnages consumed. The allocation of votes in each category is periodically reviewed.

The International Tin Agreement establishes floor and ceiling prices for tin and, by the medium of a buffer stock and remedial trading on the London Metal Exchange, aims at confining the price within these limits. Because of a world over-supply situation of tin, the Council imposed export controls on producer members in January 1973. For the second quarter of 1973 export by all producer countries except Australia was cut by 2.5 per cent of 1972 production and the Australian export was cut by 2.5 per cent of estimated 1972 exports.

#### **International Lead-Zinc Study Group**

With the cessation of stockpile buying of lead and zinc by the United States Government in 1958, world producers were faced with the prospect of a serious imbalance between world supply and demand for these metals. To meet this problem a series of meetings of interested governments was held, at which Australia was represented. These meetings culminated in the formation of the International Lead-Zinc Study Group which was established in January 1960. The Study Group comprises the following Governments: Algeria, Australia, Austria, Belgium, Bulgaria, Canada, Czechoslovakia, Denmark, Finland, France, the Federal Republic of Germany, Hungary, India, Italy, Japan, Mexico, Morocco, the Netherlands, Norway, Peru, Poland, the Republic of South Africa, Spain, Sweden, Tunisia, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Yugoslavia and Zambia. The Group provides opportunities for inter-governmental consultations on international trade in lead and zinc and for studies of the world situation in lead and zinc having regard especially to the desirability of providing continuous accurate information regarding the supply and demand position and its probable development.

### **MINERAL INDUSTRY STATISTICS**

Statistics presented in this chapter refer mainly to the mining industry, mineral production, mineral exploration, and overseas participation in the Australian mining industry. In addition to the mining industry, data relating to mineral processing and treatment and overseas trade are included to give more information about the mining industry and other associated activities in the Australian economy.

#### **Mining industry statistics, 1968-69, 1969-70 and 1970-71**

This section contains statistics of the mining industry for all States and Territories and Australia obtained from Mining Censuses conducted in respect of the years ended June 1969, 1970 and 1971.

Prior to 1968-69 the Annual Mining and Quarrying Census related to years ended 31 December. However, commencing with 1968-69, the Mining Census was changed to a year ended 30 June to conform with the period covered by other economic censuses in Australia. There are several other differences between the censuses of 1968-69, 1969-70 and 1970-71 and those for earlier years (mainly in definition, scope and coverage) and as a result the statistics obtained for 1968-69 and later, are not strictly comparable with those for earlier years. Further information regarding these differences is given in Year Book No. 57, pages 912-914. Mining industry statistics for years prior to 1968-69 are also contained in Year Book No. 57 and earlier issues.

For the year ended June 1969, the Mining Census (including quarrying) was conducted for the first time on an integrated basis with Censuses of Manufacturing, Electricity and Gas, Retail Trade and Selected Services, and Wholesale Trade.

Briefly, the integration of these economic censuses was designed to increase substantially the usefulness and comparability of economic statistics collected and published by the Bureau, and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates. A detailed description of the integrated censuses is contained in Chapter 31, Year Book No. 56.

For 1969-70 and subsequent years the annual Mining Census has been conducted on the same basis as that for 1968-69.



The table below shows key items of data for Australia for 1970-71 and summary data for 1968-69 and 1969-70. Each following table shows statistics for a particular item for all States and Territories and Australia for 1970-71 and summary data for 1968-69 and 1969-70, and is preceded by an explanation of the item.

**MINING ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY SUB-DIVISION  
AUSTRALIA, 1968-69 TO 1970-71**

Industry sub-division	ASIC code(a)	Number of estab- lish- ments operat- ing at end of June	Persons employed at end of June(b)			Wages and Salaries	Turn- over	Stocks at 30 June		Pur- chases, transfers in and selected expenses	Fixed capital expendi- ture (outlay on fixed tangible assets less dis- posals)	
			Males	Females	Total			Opening	Closing		Value added	\$'000
Metallic minerals	11	No. 335	No. 29,556	No. 1,859	No. 31,415	\$'000 167,260	\$'000 989,871	\$'000 88,645	\$'000 94,178	\$'000 279,756	\$'000 715,648	\$'000 321,844
Coal	12	139	21,552	408	21,960	118,504	624,620	36,542	42,720	177,659	453,139	166,180
Crude petroleum including natural gas	13	8										
Construction materials	14	759	6,355	409	6,764	29,247	149,502	11,885	14,371	58,753	93,236	13,338
Other non-metallic minerals	15	325	2,353	150	2,503	10,167	50,925	5,226	6,096	24,326	27,472	19,213
<b>Total mining, excluding services to mining—</b>												
1970-71	.	1,566	59,816	2,826	62,642	325,178	1,814,918	142,298	157,365	540,493	1,289,495	520,575
1969-70	.	1,502	56,468	2,382	58,850	275,620	1,479,785	114,961	138,354	460,594	1,042,584	348,255
1968-69	.	1,494	53,353	2,089	55,442	241,292	1,147,881	97,771	113,367	414,277	749,201	303,537

(a) Australian Standard Industrial Classification.

(b) Includes working proprietors.

### Number of establishments

The following table shows the number of establishments operating at end of June. These relate to mining establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

**MINING ESTABLISHMENTS: NUMBER OF ESTABLISHMENTS OPERATING AT END  
OF JUNE 1969 TO 1971, BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES**

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metallic minerals	11	118	11	90	8	58	33	17	..	335
Coal	12	98	6	29	1	3	2	..	..	139
Crude petroleum including natural gas	13	..	2	3	1	2	..	..	..	8
Construction materials	14	268	206	139	79	32	20	7	8	759
Other non-metallic minerals	15	184	41	31	33	27	9	..	..	325
<b>Total mining, excluding services to mining—</b>										
1971	.	668	266	292	122	122	64	24	8	1,566
1970	.	620	221	300	130	122	78	25	6	1,502
1969	.	581	248	300	135	128	75	20	7	1,494

(a) Australian Standard Industrial Classification.

### Employment

The statistics of the number of persons employed shown in the following table relate to working proprietors at the end of June and employees on the payroll of the last pay period in June, including those working at separately located administrative offices and ancillary units in the State. Note that persons employed in each State (and their wages and salaries) relate to those employed at establishments, administrative offices or ancillary units located in the State, even though the administrative offices or ancillary units may have served establishments located in another State.

**MINING ESTABLISHMENTS: MALES, FEMALES AND PERSONS EMPLOYED<sup>(a)</sup>  
BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES, AT END OF JUNE 1971**

Industry sub-division	ASIC code(b)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>MALES EMPLOYED</b>										
Metallic minerals . . .	11	7,291	3,150	7,310	953	8,517	4,194	1,359	..	29,556
Coal . . .	12	14,476		3,085		692	(c)	..	..	21,552
Crude petroleum including natural gas . . .	13	..		(c)			..	..	..	
Construction materials . .	14	2,000	1,797	1,164	523	570	146	68	87	6,355
Other non-metallic minerals .	15	873	242	(c)	390	506	(c)	..	..	2,353
<b>Total mining, excluding ser-</b> <b>vices to mining—</b>										
1971 . . . . .		24,640	5,189	11,859	1,866	10,285	4,463	1,427	87	59,816
1970 . . . . .		24,135	5,261	10,701	1,924	8,857	4,139	1,361	90	56,468
1969 . . . . .		23,064	5,092	9,889	1,868	8,189	3,932	1,233	86	53,353
<b>FEMALES EMPLOYED</b>										
Metallic minerals . . .	11	270	205	560	92	598	189	66	..	1,859
Coal . . .	12	209		59		14	(c)	..	..	408
Crude petroleum including natural gas . . .	13	..		(c)			..	..	..	
Construction materials . .	14	93	165	63	21	60	2	..	3	409
Other non-metallic minerals .	15	70	24	(c)	15	32	(c)	..	..	150
<b>Total mining, excluding ser-</b> <b>vices to mining—</b>										
1971 . . . . .		642	394	690	128	704	197	68	3	2,826
1970 . . . . .		660	326	635	122	408	173	56	2	2,382
1969 . . . . .		564	325	558	96	343	145	48	10	2,089
<b>PERSONS EMPLOYED</b>										
Metallic minerals . . .	11	7,561	3,355	7,870	1,045	9,115	4,383	1,425	..	31,415
Coal . . .	12	14,685		3,144		706	(c)	..	..	21,960
Crude petroleum including natural gas . . .	13	..		(c)			..	..	..	
Construction materials . .	14	2,093	1,962	1,227	544	630	148	70	90	6,764
Other non-metallic minerals .	15	943	266	(c)	405	538	(c)	..	..	2,503
<b>Total mining, excluding ser-</b> <b>vices to mining—</b>										
1971 . . . . .		25,282	5,583	12,549	1,994	10,989	4,660	1,495	90	62,642
1970 . . . . .		24,795	5,587	11,336	2,046	9,265	4,312	1,417	92	58,850
1969 . . . . .		23,628	5,417	10,447	1,964	8,532	4,077	1,281	96	55,442

(a) At end of June; includes working proprietors.  
available for publication.

(b) Australian Standard Industrial Classification.

(c) Not

### Accidents in mining

Particulars of numbers of persons killed and injured in accidents in mines and associated treatment plants are recorded by State Mines Departments. Numbers injured are not reported on a uniform basis in all States, as varying criteria are used in determining what constitutes injury. In 1970-71 (calendar year 1970 for Queensland), 60 persons were recorded as killed and 1,158 as injured in mining (including quarrying) accidents. Recorded deaths and injuries in that year in the metallic minerals industry were 29 and 678, and in the coal mining industry 19 and 311.

### Wages and salaries

The following table shows the wages and salaries of all employees of the establishment, including those working at separately located administrative offices and ancillary units in the State. Drawings of working proprietors are not included.

**MINING ESTABLISHMENTS: WAGES AND SALARIES BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69 TO 1970-71**  
(\$'000)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metallic minerals . . .	11	39,153	17,596	{ 46,075	4,723	{ 46,734	{ 21,661	8,317	..	167,260
Coal . . .	12	80,502		{ 17,385		{ (b)	{ (b)	..	..	118,504
Crude petroleum including natural gas . . .	13	..	8,984	{ (b)	2,152	{ 3,246	{ 3,023	..	..	
Construction materials . .	14	9,419		{ 4,323		{ 2,937	{ 490	385	471	29,247
Other non-metallic minerals	15	3,161	938	{ (b)	1,584	..	(b)	..	..	10,167
<b>Total mining, excluding ser-</b> <b>vices to mining—</b>										
1970-71 . . .		132,236	27,518	69,211	8,459	55,941	22,641	8,702	471	325,178
1969-70 . . .		120,079	23,671	55,430	7,360	42,603	18,544	7,478	455	275,620
1968-69 . . .		108,287	22,840	48,181	6,929	30,851	17,217	6,626	360	241,292

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Turnover**

The following table shows turnover (sales of minerals and other goods whether produced by the establishment or not, plus transfers out of minerals and other goods to other establishments of the same enterprise, plus all other operating revenue from outside the enterprise, such as commission, repair and service revenue). This item excludes rents, leasing revenue, interest, royalties, and receipts from the sale of fixed tangible assets.

**MINING ESTABLISHMENTS: TURNOVER, BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69 TO 1970-71**  
(\$'000)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metallic minerals . . .	11	157,194	215,898	{ 196,057	74,352	{ 462,087	{ 74,280	39,304	..	989,871
Coal . . .	12	249,592		{ 96,756		{ (b)	{ (b)	..	..	624,620
Crude petroleum including natural gas . . .	13	..	49,950	{ (b)	9,667	{ 42,772	{ 12,334	2,032	2,187	
Construction materials . .	14	52,875		{ 17,949		{ 9,914	{ 2,510	..	..	149,502
Other non-metallic minerals	15	15,519	4,812	{ (b)	12,837	..	(b)	..	..	50,925
<b>Total mining, excluding ser-</b> <b>vices to mining—</b>										
1970-71 . . .		475,180	270,659	323,536	96,856	527,107	78,057	41,336	2,187	1,814,918
1969-70 . . .		443,443	118,098	299,956	90,595	403,164	84,141	38,411	1,978	1,479,785
1968-69 . . .		371,184	92,730	228,590	81,184	273,186	63,073	36,292	1,641	1,147,881

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Purchases, transfers in and selected expenses**

The following table shows the total of purchases of electricity, fuels, stores and other materials, transfers in of goods from other establishments of the same enterprise, charges for processing and other commission work and payments to mining contractors, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments.

**MINING ESTABLISHMENTS: PURCHASES, TRANSFERS IN AND SELECTED EXPENSES  
BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES, 1968-69 TO 1970-71**  
(\$'000)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metallic minerals . . .	11	54,188	26,171	{ 35,886	22,678	{ 133,918	{ 19,853	19,126	..	279,756
Coal . . .	12	104,879		{ 37,211		{ 2,587	{ (b)	..	..	177,659
Crude petroleum including natural gas . . .	13	..	23,802	{ (b)	3,023	{ 5,637	{ 1,111	864	921	
Construction materials . .	14	16,637		{ 6,758		{ 4,762	{ (b)	..	..	58,753
Other non-metallic minerals	15	8,100	2,496	{ (b)	6,193	..	..	..	..	24,326
<b>Total mining, excluding ser-</b> <b>vices to mining—</b>										
1970-71 . . .		183,804	52,470	83,101	31,894	146,904	21,408	19,989	921	540,493
1969-70 . . .		158,636	38,016	73,311	30,770	125,147	20,796	13,207	711	460,594
1968-69 . . .		147,166	38,469	75,913	26,242	90,867	20,128	14,827	665	414,277

(a) Australian Standard Industrial Classification.

(b) Not available for publication.



## Stocks

Statistics on the value of closing stocks are shown in the following table. Figures include stocks of materials, fuels, etc., and mine products and work-in-progress of the establishment whether located at the establishment or elsewhere.

MINING ESTABLISHMENTS: CLOSING STOCKS AT END OF JUNE 1969 TO 1971  
BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES  
(\$'000)

Industry sub-division	ASIC code (a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
CLOSING STOCKS										
Metallic minerals . . .	11	20,229	9,302	{ 14,563 }	3,207	{ 38,880	{ 12,241	5,925	..	94,178
Coal . . .	12	19,012		{ 11,016 }		{ 2,205	{ (b)	..	..	42,720
Crude petroleum including natural gas . . .	13	..	3,097	{ (b)	835	{ 2,042	{ 195	188	167	14,371
Construction materials . . .	14	6,080		{ 1,768 }		{ 2,099	{ (b)	..	..	6,096
Other non-metallic minerals	15	763	870	(b)	1,607					
Total mining, excluding services to mining—										
1970-71 . . .		46,084	13,268	28,357	5,649	45,225	12,502	6,114	167	157,365
1969-70 . . .		42,815	12,258	22,861	4,467	39,093	11,464	5,198	197	138,354
1968-69 . . .		37,347	9,713	19,733	3,607	28,343	9,450	5,097	78	113,367

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

## Value added

The following table shows value added, calculated as the value of turnover (sales plus transfers out and other operating revenue) and closing stocks *less* purchases plus transfers in and selected expenses and opening stocks.

MINING ESTABLISHMENTS: VALUE ADDED, BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69 TO 1970-71  
(\$'000)

Industry sub-division	ASIC code (a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metallic minerals . . .	11	100,594	189,127	{ 161,019 }	52,360	{ 332,488	{ 55,863	20,958	..	715,648
Coal . . .	12	146,700		{ 63,808 }		{ 40,766	{ (b)	..	..	453,139
Crude petroleum including natural gas . . .	13	..	26,434	{ (b)	6,791	{ 7,326	{ 1,379	1,203	1,236	93,236
Construction materials . . .	14	37,253		{ 11,614 }		{ 5,864	{ (b)	..	..	27,472
Other non-metallic minerals	15	7,648	2,392	(b)	6,514					
Total mining, excluding services to mining—										
1970-71 . . .		292,194	217,953	245,746	65,665	386,444	58,095	22,161	1,236	1,289,495
1969-70 . . .		290,232	82,478	229,970	60,120	286,874	65,791	25,735	1,386	1,042,584
1968-69 . . .		227,752	51,628	155,788	55,473	191,098	44,286	22,200	976	749,201

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Fixed capital expenditure**

Figures in the following table relate to fixed capital expenditure. Such figures are calculated by deducting disposals of fixed tangible assets from the total outlay on new and second-hand tangible assets.

**MINING ESTABLISHMENTS: FIXED CAPITAL EXPENDITURE (OUTLAY ON FIXED TANGIBLE ASSETS LESS DISPOSALS) BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES**  
**1968-69 TO 1970-71**

(\$'000)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metallic minerals . . .	11	18,056	75,246	63,490 37,707	12,872	171,674	25,746 (b)	31,530	..	321,844
Coal . . .	12	46,843								
Crude petroleum including natural gas . . .	13	..	3,966 1,177	1,523 (b)	465 1,328	1,990 8,147	144 (b)	308	610	166,180
Construction materials . . .	14	4,333								
Other non-metallic minerals . . .	15	7,775								13,338
										19,213
<b>Total mining, excluding ser-</b> <b>vices to mining—</b>										
1970-71 . . .		77,008	80,389	103,454	14,665	186,644	25,967	31,837	610	520,575
1969-70 . . .		60,885	93,393	54,295	12,311	92,904	20,597	13,655	216	348,255
1968-69 . . .		44,857	103,816	38,808	7,786	84,692	12,910	10,618	51	303,537

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Mineral production**

This section contains details of the output (quantities and values) of minerals during the year ended June 1971 for all States and Territories and Australia, together with information for Australia for the four preceding years.

It should be noted that details for the years 1967 and 1968 relate to a year ended December. The change in 1969 to a June year was made to bring mineral production statistics and the annual mining census (which in previous years also related to a December year) to the same time basis as the other economic censuses conducted during that year.

Minerals are classified into five major groups, namely metallic minerals, coal, crude petroleum (including natural gas), construction materials and other non-metallic minerals. In the statistics published in this section the minerals are arranged in these five groups.

The statistics are derived from information supplied in returns to the various State Mines Departments and this Bureau, supplemented in some cases by information made available by the Department of Minerals and Energy and by data compiled by this Bureau from other sources.

**Scope of mineral statistics and relation to mining industry statistics**

The statistics of mineral production for the years ended June 1969, 1970 and 1971, apart from the change to a June year basis, are comparable with those for earlier years. Although the integration of the mining census for 1968-69 with other economic censuses conducted in that year (manufacturing, electricity and gas, retail trade, and wholesale trade) was accompanied by major changes in the scope of the mining census and thus in the scope of the mining industry statistics, these changes had little effect on the scope of the mineral production statistics now published. This is because mineral production data were collected, not only from establishments coming within the scope of the mining census as now defined, but also from those establishments classified as non-mining establishments which, as a subsidiary activity, carried out mining or quarrying activities (e.g. brick and cement manufacturing establishments extracting clays, limestone), and from itinerant and part-time miners.

However, as in past years, coverage is deficient in the case of some minerals, principally because of the difficulties in obtaining complete lists of producers and collecting satisfactory returns.

### Principles for measuring output of minerals

The quantities of individual minerals produced are recorded, in general, in the form in which the minerals are dispatched from the mine or from associated treatment works in the locality of the mine. Thus, for metallic minerals, the output is recorded as ore if no treatment is undertaken at or near the mine, and as concentrate if ore dressing operations are carried out in associated works in the locality of the mine. In addition to the basic quantity data, the content of metallic minerals (based on assay) are recorded. No allowance has been made for losses in smelting and refining and the quantities shown are therefore, in general, greater than the contents actually recoverable.

The output of individual minerals is valued at the mine or at associated treatment works in the locality of the mine. This valuation is derived, in general, by valuing the quantity produced during the year at the unit selling value (including any subsidy) less any transport costs from the mine or associated treatment works to the point of sale. For some metals, however, special values of output, based on actual or estimated realisations are supplied by certain large mineral producers.

It should be noted that, commencing with the year 1968-69, the output of metals by enterprises for their own consumption in Australia has been valued on a different basis to that used in previous years. The effect of these changes is that the overall value of coal produced in 1968-69 and later years is somewhat lower and the value of certain other minerals somewhat higher than if the earlier valuation methods had been retained.

### Quantity of minerals produced

The following tables show particulars of the quantities of minerals produced during 1970-71 and earlier years.

#### QUANTITY OF MINERALS PRODUCED: STATES AND TERRITORIES, 1970-71

Mineral		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
METALLIC MINERALS										
Antimony concentrate(a)	tonnes	345	2,673	803	..	..	..	..	..	3,821
Bauxite	'000 tonnes	8	8	6,611	..	4,207	..	209	..	11,043
Beryllium ore	tonnes	5	..	..	..	23	..	..	..	28
Bismuth concentrate	..	..	..	275	..	1	..	1,620	..	1,896
Copper concentrate(b)	..	43,804	91	501,171	4,579	2,624	83,390	26,648	..	662,308
Copper ore(c)	..	(d)7,429	1,085	21,226	630	93	..	673	..	31,137
Gold—										
Bullion	'000 grams	2	160	1,054	..	13,245	2	2,710	..	17,174
Ore	tonnes	..	..	579	508	..	..	..	..	1,087
Iron ore	'000 tonnes	..	..	..	7,401	46,417	(e)2,045	1,248	..	57,110
Iron oxide(f)	tonnes	26,798	290	26,814	..	..	10,178	..	..	64,080
Lead concentrate	..	324,524	2	294,033	..	189	12,448	526	..	631,722
Lead-copper concentrate	..	..	..	..	..	..	10,227	..	..	10,227
Lead ore(g)	..	37	..	35,968	8	..	302	..	..	36,315
Lead-zinc middlings	..	23,400	..	..	..	..	..	..	..	23,400
Manganese ore	..	..	..	..	315	144,476	..	641,364	..	786,155
Mineral sands(h)—										
Ilmenite concentrate	..	30,639	..	113,485	..	742,634	..	..	..	886,758
Leucoxene concentrate	..	..	..	..	..	12,863	..	..	..	12,863
Monazite concentrate	..	434	..	54	..	3,659	..	..	..	4,146
Rutile concentrate	..	259,258	..	105,112	..	2,495	7,903	..	..	374,768
Xenotime concentrate	..	..	..	..	..	42	..	..	..	42
Zircon concentrate	..	288,149	..	70,117	..	55,141	4,567	..	..	417,974
Molybdenite concentrate	..	..	..	61	..	..	..	..	..	61
Nickel concentrate	..	..	..	..	..	304,046	..	..	..	304,046
Pyrite concentrate	..	..	..	34,764	68,065	..	132,526	..	..	235,355
Tantalite-columbite concentrate	'000 grams	..	..	..	..	158,786	..	..	..	158,786
Tin concentrate	tonnes	3,186	6	1,525	..	960	10,211	62	..	15,951
Tin-copper concentrate	..	..	..	..	..	..	4,367	..	..	4,367
Tungsten concentrates—										
Scheelite concentrate	..	..	..	12	..	..	1,275	..	..	1,287
Wolfram concentrate	..	5	..	152	..	..	908	10	..	1,076
Zinc concentrate	..	525,396	..	176,561	..	..	68,548	381	..	770,885
Zinc ore	..	..	..	..	254	..	..	..	..	254

For footnotes see next page.



## QUANTITY OF MINERALS PRODUCED: STATES AND TERRITORIES, 1970-71—continued

Mineral		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
COAL										
Black coal—	'000 tonnes	35,704	..	11,074	1,626	1,190	125	..	..	49,720
Semi-anthracite.	"	..	..	..	..	..	1	..	..	1
Bituminous	"	35,704	..	10,631	..	..	125	..	..	46,460
Sub-bituminous	"	..	..	443	1,626	1,190	..	..	..	3,259
Brown coal (lignite)(i)	"	..	23,180	..	..	..	..	..	..	23,180
Brown coal briquettes	"	..	1,391	..	..	..	..	..	..	1,391

## PETROLEUM(j)

Crude oil	'000 cu m	..	12,124	184	..	2,629	..	..	..	14,937
Natural gas	mil. cu m	..	864	221	860	15	..	..	..	1,962
Natural gas condensate(k)	cu m	..	..	1,433	..	..	..	..	..	1,433
Ethane(l)	'000 cu m	..	5,380	..	..	..	..	..	..	5,380
Liquefied petroleum gases(l)—										
Propane	cu m	..	346,700	..	..	..	..	..	..	346,700
Butane	cu m	..	393,335	..	..	..	..	..	..	393,335

## CONSTRUCTION MATERIALS(m)

Sand	'000 tonnes	6,305	5,747	2,113	2,570	n.a.	280	1,193	419	{(n)17,413 (n)12,993 186
Gravel	"	3,875	3,599	2,312	790	n.a.	1,201			
Dimension stone	"	16	12	(o)	49	106	2	(o)	(o)	{50,419 28,208
Crushed and broken stone	"	9,874	17,505	4,665	10,787	5,219	1,545			
Other (decomposed rock, etc.)	"	22,253	3,728	(o)	1,431	..	314			

## OTHER NON-METALLIC MINERALS

Asbestos	tonnes	699	..	..	..	52	..	..	..	751
Barite	"	229	..	..	34,067	528	..	19,184	..	54,008
Clays—										
Brick and shale	'000 tonnes	3,299	1,696	539	536	900	122	..	..	7,092
Other	"	501	384	161	110	170	71	..	..	1,397
Diatomite	tonnes	2,029	4	366	..	..	..	..	..	2,399
Dolomite	"	2,101	..	10,761	304,496	..	2,298	..	..	319,656
Felspar (including cor-nish stone)	"	2,112	..	..	806	464	..	..	..	3,382
Fluorspar	"	..	946	..	54	..	..	..	..	1,000
Garnet concentrate	"	408	..	14	..	..	..	..	..	423
Gypsum	"	40,465	46,304	..	665,381	200,751	..	..	..	952,901
Limestone (including shell and coral)	'000 tonnes	3,246	2,075	1,379	1,834	1,395	518	..	..	10,447
Lithium ores	tonnes	..	..	..	..	739	..	..	..	739
Lithia (Li <sub>2</sub> O) content	"	..	..	..	..	31	..	..	..	31
Magnesite, crude	"	17,193	..	..	256	2,215	..	..	..	19,664
Mineral pigments—red ochre	"	..	..	..	..	618	84	..	..	702
Peat(p)	"	2,437	..	..	..	1,012	229	..	..	3,678
Pebbles—for grinding	"	..	..	..	66	..	1,611	..	..	1,677
Perlite	"	..	..	1,773	..	..	..	..	..	1,773
Phosphate rock	"	..	..	..	9,164	..	..	..	..	9,164
Pyrophyllite	"	6,828	..	..	..	..	..	..	..	6,828
Salt	'000 tonnes	..	(o)	(o)	647	2,729	..	..	..	3,774
Silica	tonnes	418,222	108,103	287,530	55,840	41,147	44,206	..	..	955,049
Sillimanite	"	834	..	..	305	..	..	..	..	1,139
Talc (including steatite and chlorite)	"	1,408	..	..	11,869	31,255	..	..	..	44,532
Vermiculite	"	..	..	..	..	360	..	..	..	360

(a) Includes antimony ore. (b) Includes copper precipitate. (c) Includes cupreous ore for fertiliser. (d) Includes copper slag. (e) Iron concentrate. (f) For cement manufacture, coal washing, flux and gas purification. (g) Includes silver lead-ore, silver-lead slimes and lead slag. (h) Details relating to rutile-zircon concentrates produced in one State and finally separated in another State are included, in separated form, in the data of the State of origin. (i) Includes brown coal used for briquette production. (j) Source: Department of Minerals and Energy and State Mines Departments. (k) Sales-excludes condensate blended with other petroleum products. (l) Excludes refinery production. (m) Incomplete, see individual States. (n) Incomplete, excludes Western Australia. (o) Not available for publication. (p) Comprises peat for fertiliser and peat moss.

NOTE. Particulars of the production of uranium concentrate are not available for publication.

## QUANTITY OF MINERALS PRODUCED: AUSTRALIA, 1967 TO 1970-71

<i>Mineral</i>		1967	1968	1968-69(a)	1969-70(a)	1970-71(a)
METALLIC MINERALS						
Antimony concentrate(b)	tonnes	156	248	265	353	3,821
Bauxite	'000 tonnes	4,243	4,955	6,317	8,294	11,043
Beryllium ore	tonnes	56	15	14	(c)	28
Bismuth concentrate	"	108	1,578	1,553	1,768	1,896
Chromite	"	140	87	..	..	..
Copper concentrate(d)	"	398,980	459,355	500,949	545,211	662,308
Copper ore(e)	"	31,958	(f)39,831	(f)46,733	(f)83,493	(f)31,137
Gold—						
Bullion	'000 grams	28,287	25,749	23,161	19,691	17,174
Ore	tonnes	6	6	6	914	1,087
Iron ore	'000 tonnes	17,309	(g)26,625	(g)32,541	(g)45,119	(g)57,110
Iron oxide(h)	tonnes	53,850	64,105	46,940	58,400	64,080
Lead concentrate	"	545,813	611,365	652,225	692,836	631,722
Lead-copper concentrate	"	12,423	12,760	13,033	13,517	10,227
Lead ore(i)	"	18,516	52,287	53,251	41,352	36,315
Lead-zinc middlings	"	14,921	5,459	3,298	37,949	23,400
Manganese ore	"	568,953	743,825	847,198	792,783	786,155
Mineral sands—						
Ilmenite concentrate	"	552,949	560,351	667,231	789,350	886,758
Leucoxene concentrate	"	707	1,633	8,870	9,553	12,863
Monazite concentrate	"	2,350	2,088	4,296	4,124	4,146
Rutile concentrate	"	269,775	292,232	316,663	372,033	374,768
Xenotime concentrate	"	18	18	39	103	42
Zircon concentrate	"	288,234	298,916	347,204	376,708	417,974
Molybdenite concentrate	"	..	10	48	117	61
Nickel concentrate	"	16,006	37,472	51,961	160,083	304,046
Osmiridium—native	grams	..	340	..	..	..
Pyrite concentrate	tonnes	256,804	167,917	134,935	154,758	235,355
Tantalite-columbite concentrate	'000 grams	36,100	108,016	92,019	45,934	158,786
Tin concentrate	tonnes	8,694	10,587	11,967	15,265	15,951
Tin-copper concentrate	"	..	891	2,145	3,708	4,367
Tungsten concentrates—						
Scheelite concentrate	"	1,221	1,489	1,588	1,406	1,287
Wolfram concentrate	"	455	568	746	1,059	1,076
Zinc concentrate	"	714,070	729,838	798,554	889,806	770,885
Zinc ore	"	(j)201	2,743	11,380	..	254
COAL						
Black coal	'000 tonnes	35,264	40,828	43,334	48,498	49,720
Semi-anthracite	"	39	31	25	7	1
Bituminous	"	31,801	37,253	39,656	44,762	46,460
Sub-bituminous	"	3,424	3,544	3,653	3,729	3,259
Brown coal (lignite)(k)	"	23,759	23,339	23,500	24,311	23,180
Brown coal briquettes	"	1,879	1,578	1,495	1,565	1,391
PETROLEUM(l)						
Crude oil	'000 cu m	1,208	2,206	2,238	4,872	14,937
Natural gas	mil. cu m	4	6	58	781	1,962
Natural gas condensate(m)	cu m	..	..	1	133	1,433
Ethane(n)	'000 cu m	..	..	..	481	5,380
Liquefied petroleum gases(n)—						
Propane	cu m	..	..	..	15,605	346,700
Butane	cu m	..	..	..	21,768	393,335

For footnotes see next page.

QUANTITY OF MINERALS PRODUCED: AUSTRALIA, 1967 TO 1970-71—*continued*

<i>Mineral</i>		1967	1968	1968-69 (a)	1969-70 (a)	1970-71 (a)
CONSTRUCTION MATERIALS(o)						
Sand . . . . .	'000 tonnes	11,328	14,637	17,575	17,139	17,413
Gravel . . . . .	"	9,193	8,473	11,240	12,168	12,993
Dimension stone . . . . .	"	242	280	301	276	186
Crushed and broken stone . . . . .	"	46,913	45,087	45,890	48,851	50,419
Other . . . . .	"	25,752	27,008	24,280	28,860	28,208
OTHER NON-METALLIC MINERALS						
Asbestos . . . . .	tonnes	544	814	745	748	751
Barite . . . . .	"	15,917	39,783	46,310	39,976	54,008
Clays—						
Brick and shale . . . . .	'000 tonnes	5,787	6,525	7,385	7,678	7,092
Other(o) . . . . .	"	1	1	1,224	1,470	1,397
Diatomite . . . . .	tonnes	11,281	6,833	2,685	2,731	2,399
Dolomite . . . . .	"	295,323	321,814	310,549	335,386	319,656
Felspar (including cornish stone) . . . . .	"	4,521	4,916	5,834	3,648	3,382
Fluorspar . . . . .	"	..	..	..	619	1,000
Garnet concentrate . . . . .	"	600	170	327	336	423
Gypsum . . . . .	"	928,752	857,283	938,049	861,700	952,901
Limestone (including shell and coral) '000 tonnes		8,489	8,606	9,179	10,238	10,447
Lithium ores . . . . .	tonnes	678	750	830	777	739
Lithia (Li <sub>2</sub> O) content . . . . .	"	30	32	35	33	31
Loam—for foundry moulding . . . . .	"	(p)	(p)	(p)	(p)	(p)
Magnesite, crude . . . . .	"	24,033	23,517	23,718	23,539	19,664
Mineral pigments—red ochre . . . . .	"	364	534	664	42	702
Peat(q) . . . . .	"	..	..	2,168	3,278	3,678
Pebbles—for grinding . . . . .	"	1,326	1,342	1,118	1,350	1,677
Perlite . . . . .	"	1,411	1,066	808	1,399	1,773
Phosphate rock . . . . .	"	11,959	5,836	10,726	18,463	9,164
Pyrophyllite . . . . .	"	..	509	1,964	5,080	6,828
Salt . . . . .	'000 tonnes	714	914	1,022	2,054	3,774
Silica . . . . .	tonnes	450,673	551,388	743,798	786,528	955,049
Sillimanite . . . . .	"	1,202	2,149	1,939	1,175	1,139
Talc (including steatite and chlorite) . . . . .	"	18,064	38,894	42,172	60,060	44,532
Vermiculite . . . . .	"	..	..	..	..	360

(a) Year ended 30 June. (b) Includes antimony ore. (c) Not available for publication. (d) Includes copper precipitate. (e) Includes cupreous ore for fertiliser. (f) Includes copper slag. (g) Includes iron concentrate. (h) For cement manufacture, coal washing, flux and gas purification. (i) Includes silver-lead ore, silver-lead slimes and lead slag. (j) Zinc ore for fertiliser. (k) Includes brown coal used for briquette production. (l) Source: Department of Minerals and Energy and State Mines Departments. (m) Sales—excludes condensate blended with other petroleum products. (n) Excludes refinery production. (o) Incomplete, owing to difficulties of coverage. (p) Included in silica. (q) Comprises peat for fertiliser and peat moss.

NOTE. Particulars of the production of uranium concentrate are not available for publication.

## Contents of metallic minerals produced

In the foregoing tables the section headed "Metallic Minerals" contains statistics of ores and concentrates produced. The following tables contain statistics of the metallic content of these ores and concentrates. The figures are the result of assays carried out on the ores and concentrates and may not represent the ultimate yield of metals produced after smelting and refining.



**CONTENTS OF METALLIC MINERALS PRODUCED  
STATES AND NORTHERN TERRITORY, 1970-71**

<i>Content of metallic minerals produced</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
Alumina (Al <sub>2</sub> O <sub>3</sub> ) . . . '000 tonnes	3	3	(a)	..	(a)	..	105	(a)
Antimony . . . tonnes	888	352	148	..	..	..	..	1,388
Beryllium oxide (BeO) . . . mtu(b)	61	..	..	..	277	..	..	338
Bismuth . . . '000 grams	..	..	23,369	..	261	..	214,386	238,016
Cadmium . . . tonnes	1,042	..	360	..	..	61	2	1,465
Cobalt . . . " "	110	..	..	..	336	..	..	446
Copper . . . " "	14,389	40	122,594	2,285	3,439	23,846	6,373	172,966
Gold . . . '000 grams	315	183	2,497	3	10,737	1,313	4,056	19,103
Iron(c) . . . '000 tonnes	..	..	..	4,584	29,338	(d)1,413	772	36,107
Lead . . . tonnes	255,044	1	148,506	5	85	12,516	274	416,432
Manganese(e) . . . " "	5,979	..	..	..	65,455	176	302,020	373,630
Manganese dioxide (MnO <sub>2</sub> )(f)	..	..	..	82	..	..	..	82
Mercury . . . '000 grams	..	..	..	..	..	662	..	662
Molybdenum disulphide (MoS <sub>2</sub> ) . . . tonnes	..	..	51,818	..	..	..	..	51,818
Monazite . . . tonnes	390	..	49	..	3,403	..	..	3,842
Nickel . . . " "	..	..	..	..	34,917	..	..	34,917
Palladium . . . grams	..	1,758	..	..	..	..	..	1,758
Platinum . . . " "	..	1,191	..	..	28,293	..	..	29,484
Silver . . . '000 grams	299,440	6	367,190	15	3,430	49,362	4,303	723,746
Sulphur(g) . . . tonnes	210,512	..	73,766	30,362	..	90,608	..	405,247
Tantalite-columbite (Ta <sub>2</sub> O <sub>5</sub> + Nb <sub>2</sub> O <sub>5</sub> ) . . . '000 grams	..	..	..	..	63,799	..	..	63,799
Tin . . . tonnes	1,880	3	1,013	..	667	5,322	39	8,923
Titanium dioxide (TiO <sub>2</sub> ) . . . tonnes	262,674	..	161,675	..	421,342	7,507	..	853,198
Tungstic oxide (WO <sub>3</sub> ) . . . mtu(b)	261	..	10,445	..	..	154,870	486	166,062
Yttrium oxide (Y <sub>2</sub> O <sub>3</sub> ) . . . '000 grams	..	..	..	..	9,647	..	..	9,647
Zinc . . . tonnes	294,732	..	108,455	76	..	40,694	188	444,145
Zirconium dioxide (ZrO <sub>2</sub> ) . . . " "	191,784	..	46,943	..	36,124	3,026	..	277,877

(a) Not available for publication. (b) Metric ton unit (mtu) equals 10 kilograms. (c) Excludes iron content of iron oxide not intended for metal extraction. (d) Contained in iron concentrate. (e) Content of metallurgical grade manganese ore and zinc concentrate. (f) Content of manganese ore of other than metallurgical grade. (g) Sulphur content of pyrite and other minerals from which sulphur is recovered.

NOTE. Particulars of production of uranium oxide (U<sub>3</sub>O<sub>8</sub>) are not available for publication.

**CONTENTS OF METALLIC MINERALS PRODUCED: AUSTRALIA, 1967 TO 1970-71**

<i>Content of metallic minerals produced</i>	<i>1967</i>	<i>1968</i>	<i>1968-69 (a)</i>	<i>1969-70 (a)</i>	<i>1970-71 (a)</i>
Alumina (Al <sub>2</sub> O <sub>3</sub> ) . . . '000 tonnes	(b)	(b)	(b)	(b)	(b)
Antimony . . . tonnes	945	856	868	969	1,388
Beryllium oxide (BeO) . . . mtu(c)	686	181	175	(b)	338
Bismuth . . . '000 grams	11,583	182,888	191,271	201,267	238,016
Cadmium . . . tonnes	1,345	1,381	1,229	1,339	1,465
Chromic oxide (Cr <sub>2</sub> O <sub>3</sub> ) . . . " "	45	27	..	..	..
Cobalt . . . " "	148	239	215	311	446
Copper . . . " "	91,811	109,638	125,308	142,322	172,966
Gold . . . '000 grams	25,049	24,316	22,713	20,496	19,103
Iron(d) . . . '000 tonnes	11,104	(e)17,192	(e)20,831	(e)28,676	(e)36,107
Lead . . . tonnes	381,809	388,812	417,661	459,357	416,432
Manganese(f) . . . " "	268,907	350,637	378,503	396,536	373,630
Manganese dioxide (MnO <sub>2</sub> )(g)	232	136	150	111	82
Mercury . . . '000 grams	1,907	974	1,566	1,466	662
Molybdenum disulphide (MoS <sub>2</sub> ) . . . " "	..	8,693	40,653	99,319	51,818
Monazite . . . tonnes	2,198	1,879	3,936	3,831	3,842
Nickel . . . " "	2,094	4,677	6,184	18,047	34,917
Osmiridium . . . grams	..	340	..	..	..
Palladium . . . " "	..	..	9,979	482	1,758
Platinum . . . " "	..	..	14,713	17,208	29,484
Silver . . . '000 grams	617,159	665,424	707,856	855,926	723,746
Sulphur(h) . . . tonnes	398,667	355,606	367,852	361,377	405,247
Tantalite-columbite (Ta <sub>2</sub> O <sub>5</sub> + Nb <sub>2</sub> O <sub>5</sub> ) '000 grams	14,926	25,482	10,622	28,992	63,799
Tin . . . tonnes	5,676	6,642	7,536	8,705	8,923
Titanium dioxide (TiO <sub>2</sub> ) . . . " "	561,766	588,007	676,775	803,127	853,198
Tungstic oxide (WO <sub>3</sub> ) . . . mtu(c)	121,123	146,872	165,728	176,009	166,062
Yttrium oxide (Y <sub>2</sub> O <sub>3</sub> ) . . . '000 grams	4,298	4,309	7,399	21,404	9,647
Zinc . . . tonnes	406,954	422,393	444,407	502,036	444,145
Zirconium dioxide (ZrO <sub>2</sub> ) . . . " "	191,486	198,724	227,688	250,070	277,877

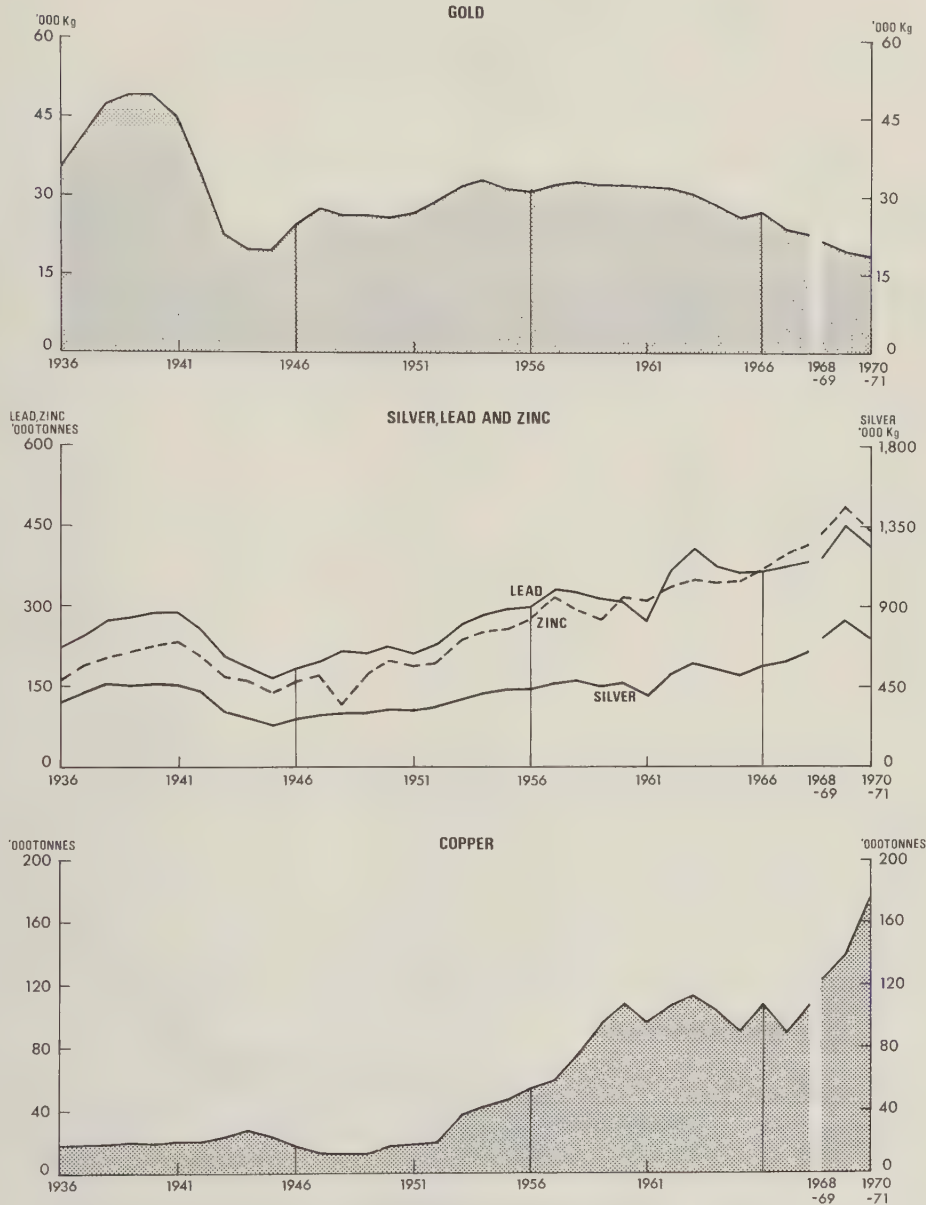
(a) Year ended 30 June. (b) Not available for publication. (c) Metric ton unit (mtu) equals 10 kilograms. (d) Excludes iron content of iron oxide not intended for metal extraction. (e) Includes iron contained in iron concentrate. (f) Content of metallurgical grade manganese ore and zinc concentrate. (g) Content of manganese ore of other than metallurgical grade. (h) Sulphur content of pyrite and other minerals from which sulphur is recovered.

NOTE. Particulars of production of uranium oxide (U<sub>3</sub>O<sub>8</sub>) are not available for publication.

## MINE PRODUCTION OF PRINCIPAL METALS: AUSTRALIA

(METALLIC CONTENT OF MINERALS)

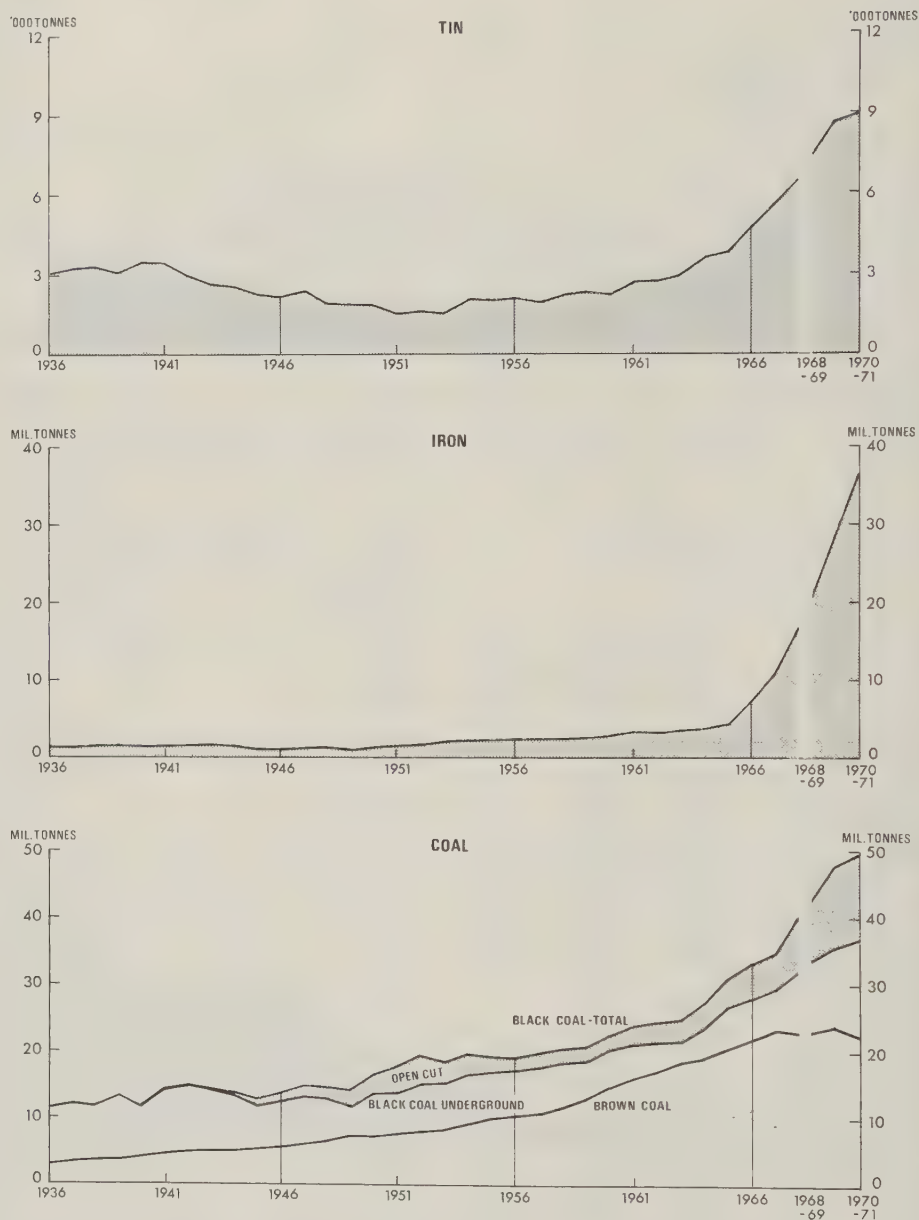
1936 TO 1970-71



# MINE PRODUCTION OF PRINCIPAL METALS AND PRODUCTION OF COAL

(METALLIC CONTENT OF MINERALS)

AUSTRALIA, 1936 TO 1970-71





## Value of minerals produced

The following table shows the value of minerals produced in 1970-71 and earlier years.

## VALUE OF MINERALS PRODUCED: AUSTRALIA, 1967 TO 1970-71

(\$'000)

Mineral	1967	1968	1968-69(a)	1969-70(a)	1970-71(a)
METALLIC MINERALS					
Antimony—					
Concentrate . . . . . }	54	83	83	84	422
Ore . . . . . }			..	7	83
Bauxite . . . . . (b)	(b)	(b)	(b)	(b)	(b)
Beryllium ore . . . . .	21	7	7	(b)	9
Bismuth concentrate . . . . .	139	1,979	2,087	2,441	2,672
Chromite . . . . .	7	4	..	..	..
Copper—					
Concentrate . . . . . }			103,872	145,246	129,752
Ore . . . . . }	72,515	(c)92,396	(c)2,073	(c)2,874	(b)(c)
Ore for fertiliser . . . . . }			136	97	18
Precipitate . . . . . }			352	232	148
Gold—					
Bullion(d) . . . . .	24,456	23,525	22,965	19,945	17,779
Ore . . . . .	..	..	..	26	3
Iron ore . . . . .	82,994	131,482	193,246	258,950	343,682
Iron oxide . . . . .	501	578	542	645	754
Lead concentrate . . . . . }			80,598	99,507	75,825
Lead-copper concentrate . . . . . }	73,654	89,705	4,043	4,760	3,031
Lead ore(e) . . . . . }			797	463	395
Lead-zinc middlings . . . . . }			303	3,032	2,269
Manganese ore . . . . .	8,007	8,358	10,734	9,680	10,852
Mineral sands—					
Ilmenite concentrate . . . . .	4,390	4,572	5,380	6,638	7,434
Leucoxene concentrate . . . . .	33	70	358	420	975
Monazite concentrate . . . . .	289	237	501	493	530
Rutile concentrate . . . . .	19,615	21,528	23,388	31,246	37,214
Xenotime concentrate . . . . .	45	45	76	119	54
Zircon concentrate . . . . .	10,937	10,967	11,481	11,827	13,207
Molybdenite concentrate . . . . .	..	(b)	76	175	85
Nickel concentrate . . . . . (b)	(b)	(b)	(b)	(b)	(b)
Osmiridium-native . . . . .	..	2	..	..	..
Pyrite concentrate . . . . . (b)	(b)	1,842	1,713	1,473	2,190
Tantalite-columbite concentrate . . . . . (b)	(b)	(b)	(b)	(b)	936
Tin concentrate . . . . .	15,011	16,691	19,199	26,744	25,533
Tin-copper concentrate . . . . .	..	(b)	469	915	905
Tungsten concentrates . . . . .	4,509	5,514	6,725	8,753	9,044
Zinc concentrate . . . . . }			35,285	45,973	43,548
Zinc ore . . . . . }	29,354	30,398	112	..	2
Zinc ore for fertiliser . . . . . }			..	..	..
Total metallic minerals . . . . .	370,892	468,172	562,849	761,600	845,423

## COAL

Black coal . . . . .	160,099	188,785	198,713	246,659	278,280
Brown coal (lignite) . . . . .	20,686	21,555	20,879	22,131	22,975
Total coal . . . . .	180,785	210,340	219,592	268,790	301,256

## PETROLEUM

Petroleum . . . . .	21,286	39,307	40,098	88,532	216,722
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For footnotes see next page.

VALUE OF MINERALS PRODUCED: AUSTRALIA, 1967 TO 1970-71—continued  
(\$'000)

Mineral	1967	1968	1968-69(a)	1969-70(a)	1970-71(a)
CONSTRUCTION MATERIALS					
Construction materials(f).	91,789	96,812	117,113	134,638	144,708
OTHER NON-METALLIC MINERALS					
Asbestos . . . . .	108	181	180	174	170
Barite . . . . .	214	410	409	437	476
Clay—					
Brick clay and shale . . . . .	6,472	7,042	7,042	7,682	7,126
Other clays . . . . .	1,729	2,122	1,828	2,338	2,342
Diatomite . . . . .	71	52	21	21	20
Dolomite . . . . .	674	720	699	825	747
Felspar (including cornish stone) . . . . .	43	42	57	49	45
Fluorspar . . . . .	..	..	..	14	32
Garnet concentrate . . . . .	4	2	5	4	6
Gems(g) . . . . .	4,605	6,575	9,261	14,541	17,830
Gypsum . . . . .	2,119	2,171	2,351	2,238	2,577
Limestone (including shell and coral) . . . . .	11,700	11,963	13,380	14,431	15,110
Lithium ores . . . . .	9	9	13	12	12
Loam—for foundry moulding . . . . .	(h)	(h)	(h)	(h)	(h)
Magnesite, crude . . . . .	256	228	238	272	233
Mineral pigments—red ochre . . . . .	5	7	10	1	7
Peat(i) . . . . .	n.a.	n.a.	26	59	62
Pebbles—for grinding . . . . .	22	23	17	24	30
Perlite . . . . .	3	7	5	14	18
Phosphate rock . . . . .	47	23	42	73	27
Pyrophyllite . . . . .	..	7	22	45	68
Salt . . . . .	2,769	3,600	4,246	7,947	11,563
Silica . . . . .	772	1,038	1,775	2,542	3,276
Sillimanite . . . . .	29	47	44	30	27
Talc (including steatite and chlorite) . . . . .	295	657	617	946	732
Vermiculite . . . . .	..	..	..	..	2
Total other non-metallic minerals . . . . .	31,946	36,928	42,287	54,717	62,540
TOTAL					
Total, all minerals and construction materials . . . . .	696,701	851,562	981,939	1,308,277	1,570,650
Of which—					
New South Wales . . . . .	274,123	298,392	314,802	388,561	387,301
Victoria . . . . .	57,339	59,026	60,633	104,967	242,446
Queensland . . . . .	135,379	185,753	209,273	278,142	293,751
South Australia . . . . .	40,449	42,064	72,135	84,955	92,482
Western Australia . . . . .	134,319	195,316	235,017	339,959	446,507
Tasmania . . . . .	34,688	44,968	59,163	77,631	74,169
Northern Territory . . . . .	19,316	24,846	29,365	32,528	32,274
Australian Capital Territory . . . . .	1,087	1,195	1,550	1,535	1,719

(a) Year ended 30 June. (b) Not available for publication. (c) Includes value of copper slag. (d) Includes alluvial gold. (e) Includes value of silver-lead ore, silver-lead slimes and lead slag. (f) Incomplete owing to difficulties of coverage in some States. (g) Mainly opals and sapphires. (h) Included in silica. (i) Comprises peat for fertiliser and peat moss.

## Overseas participation in Australian mining industry

For the latest information available concerning overseas ownership and control in Australian mining industry see Year Book No. 57, pages 932-5.

## Mineral exploration (other than for petroleum)

### Definition

Mineral exploration (other than for petroleum) consists of the search for, and/or appraisal of, new ore occurrences and known deposits of minerals (including extensions to deposits being worked) by geological, geophysical, geochemical, and other methods (including drilling). Exploration for water is excluded. The construction of shafts and adits is included if primarily for exploration purposes. Excluded are mine development activities (which include the construction of drives, shafts, winzes, etc.) in underground mines and the preparation of quarrying sites for open-cut extraction (including overburden removal) carried out primarily for the purpose of commencing or extending mining and quarrying operations. Mine development activities (including mines under development) are included in the scope of the annual mining census.

### Sources of statistics

The statistics of exploration for minerals *other than petroleum* are derived from the annual mineral exploration census (excluding petroleum exploration), which is carried out by this Bureau in association with State Mines Departments.

### Period covered

For 1968 and earlier years the annual mineral exploration census (excluding petroleum exploration) related to years ended 31 December. As from 1968-69, the reporting period for this census has related to years ended 30 June, to conform with a similar change in the annual mining census. It should be noted that data for the six months ended 31 December 1968 are included in both the 1968 and 1968-69 figures in these tables.

### Scope of mineral exploration census

The scope of the census comprises the following activities.

(a) *Private exploration on production leases*—relates to exploration carried out *on the production lease* by privately operated mines currently producing or under development for production of minerals other than petroleum. This also includes particulars of exploration within their production leases by business undertakings operated by State and local government authorities. Mines included in this section of the mineral exploration census are also included in the annual mining census with the exception of a limited number of itinerant prospectors and small mines for which information was not collected.

(b) *Private exploration on other licensed areas*—relates to exploration carried out by private enterprises and business undertakings operated by State and local government authorities on areas covered by exploration licences, authorities to enter, authorities to prospect, and similar licences and authorities issued by State Governments for exploration for minerals other than petroleum.

(c) *Other private exploration*—relates to exploration by private enterprises and business undertakings operated by State and local government authorities for minerals other than petroleum, which is not directly connected with areas under lease, licence, etc., including general surveys, aerial surveys, report writing, map preparation and other off-site activities not directly attributable to particular leases or licence areas.

(d) *Exploration by government*—relates to exploration for minerals other than petroleum carried out by—

- (i) Commonwealth Government (Bureau of Mineral Resources, Geology and Geophysics, and Joint Coal Board), and
- (ii) State Mines Departments.



**Employment in mineral exploration**

In censuses prior to 1970-71 employment data were classified to one of the two categories: 'professional persons', and 'non-professional persons'. Employment data for working proprietors and working partners were, however, included in either one or the other of these categories. From 1970-71 separate details of man-weeks worked by 'working proprietors and working partners' were collected and are shown separately in the table on page 945.

**Expenditure, employment, footage drilled, etc., States and Northern Territory**

The following table shows expenditure, employment and footage drilled, etc., on mineral exploration other than for petroleum in each State and the Northern Territory during the years 1968 to 1971-72.

**MINERAL EXPLORATION (OTHER THAN FOR PETROLEUM)  
STATES AND NORTHERN TERRITORY, 1968 TO 1971-72**

EXPENDITURE(a) (\$'000)					
	1968(b)	1968-69	1969-70	1970-71	1971-72
<b>PRIVATE EXPLORATION</b>					
New South Wales . . . . .	5,620	7,272	16,562	21,238	15,093
Victoria . . . . .	1,476	1,600	2,353	1,853	1,258
Queensland . . . . .	13,343	18,018	25,078	32,662	22,119
South Australia . . . . .	2,661	2,961	5,760	6,220	4,057
Western Australia . . . . .	23,148	35,412	59,821	86,082	62,823
Tasmania . . . . .	2,059	2,408	3,299	4,397	3,478
Northern Territory . . . . .	4,156	4,891	5,241	8,610	8,233
<i>Total</i> . . . . .	<i>52,463</i>	<i>72,562</i>	<i>118,115</i>	<i>161,063</i>	<i>117,061</i>
<b>GOVERNMENT EXPLORATION</b>					
Commonwealth(c) . . . . .	3,529	3,591	3,995	3,928	4,603
State Mines Departments . . . . .	2,329	2,939	2,708	3,386	3,732
<i>Total</i> . . . . .	<i>5,858</i>	<i>6,530</i>	<i>6,704</i>	<i>7,314</i>	<i>8,334</i>
<b>TOTAL EXPENDITURE</b>					
On drilling . . . . .	20,448	26,196	33,522	45,106	32,905
Other . . . . .	37,873	52,896	91,296	123,272	92,490
<b>Australia</b> . . . . .	<b>58,321</b>	<b>79,092</b>	<b>124,818</b>	<b>168,377</b>	<b>125,396</b>
Payments to contractors(d) . . . . .	19,409	28,715	41,557	55,693	35,437

For footnotes see next page.

MINERAL EXPLORATION (OTHER THAN FOR PETROLEUM): STATES AND  
NORTHERN TERRITORY, 1968 TO 1971-72—*continued*

EMPLOYMENT(e) ( <sup>'000</sup> man-weeks worked)					
	1968(b)	1968-69	1969-70	1970-71	1971-72
PRIVATE EXPLORATION					
New South Wales . . . . .	20.9	26.2	30.7	40.7	31.8
Victoria . . . . .	7.0	6.3	5.7	5.1	3.4
Queensland . . . . .	33.3	36.5	48.4	60.7	44.6
South Australia . . . . .	12.2	9.2	10.9	11.2	9.0
Western Australia . . . . .	52.8	67.5	103.3	135.5	114.5
Tasmania . . . . .	7.5	7.4	8.8	11.4	7.5
Northern Territory . . . . .	11.0	10.8	12.7	17.4	18.3
<i>Total</i> . . . . .	<i>144.6</i>	<i>163.9</i>	<i>220.5</i>	<i>282.1</i>	<i>229.0</i>
GOVERNMENT EXPLORATION					
Commonwealth(c) . . . . .	11.9	11.7	16.5	18.1	14.5
State Mines Departments . . . . .	13.7	17.0	20.9	21.1	22.8
<i>Total</i> . . . . .	<i>25.5</i>	<i>28.7</i>	<i>37.4</i>	<i>39.2</i>	<i>37.3</i>
TOTAL					
By working proprietors and working partners . . . . .	(f)	(f)	(f)	7.2	4.6
By professional persons(g) . . . . .	49.9	57.6	73.1	94.5	94.4
By non-professional persons(h) . . . . .	120.2	135.0	184.8	219.5	167.3
<i>Australia</i> . . . . .	<i>170.1</i>	<i>192.6</i>	<i>257.9</i>	<i>321.2</i>	<i>266.3</i>
FOOTAGE DRILLED, SUNK OR DRIVEN ( <sup>'000</sup> ft)					
PRIVATE EXPLORATION					
New South Wales . . . . .	1,031	1,146	1,527	1,657	1,235
Victoria . . . . .	127	142	137	100	61
Queensland . . . . .	1,669	1,873	1,959	2,797	1,901
South Australia . . . . .	227	250	613	654	404
Western Australia . . . . .	1,768	2,493	6,344	6,661	6,659
Tasmania . . . . .	149	177	192	307	219
Northern Territory . . . . .	302	352	293	451	375
<i>Total</i> . . . . .	<i>5,273</i>	<i>6,432</i>	<i>11,066</i>	<i>12,627</i>	<i>10,854</i>
GOVERNMENT EXPLORATION					
Commonwealth(c) . . . . .	15	21	28	10	7
State Mines Departments . . . . .	282	314	283	274	233
<i>Total</i> . . . . .	<i>297</i>	<i>335</i>	<i>311</i>	<i>285</i>	<i>240</i>
TOTAL FOOTAGE DRILLED, SUNK OR DRIVEN(i)					
Drilled—core . . . . .	2,003	2,641	3,045	3,114	2,606
non-core . . . . .	3,445	3,916	8,101	9,224	8,247
Sunk or driven . . . . .	122	210	231	574	239
<i>Australia</i> . . . . .	<i>5,570</i>	<i>6,767</i>	<i>11,377</i>	<i>12,911</i>	<i>11,093</i>

(a) Expenditure whether charged as working expenses or capitalised. (b) Year ended 31 December. (c) Bureau of Mineral Resources and Joint Coal Board. (d) Included in expenditure shown above. Comprises amounts paid to drilling contractors, geological consultants, technical advisers, etc., for exploration services. (e) Operator and staff only (includes time spent on report writing and similar off-site activities associated with exploration); excludes contractors and their employees. (f) Not collected separately prior to 1970-71. Included in professional and non-professional employment, see text page 944. (g) Geologists, geophysicists, engineers, etc., engaged on exploration work. (h) Drill operators, field hands, etc. (i) 'Sunk or driven' relates to shafts, winzes, etc., sunk, and drives, adits, etc., driven.

## Petroleum exploration

### Source of statistics

These statistics were collected and compiled by the Bureau of Mineral Resources, Geology and Geophysics, Canberra. Statistical and other information relating to petroleum exploration is published by the Bureau of Mineral Resources in *The Petroleum Newsletter* (issued quarterly) and *The Australian Mineral Industry—Annual Review*.

### Scope

Petroleum exploration consists of the search for, and/or appraisal of, deposits of crude oil and/or natural gas and natural gas liquids by geological, geophysical, geochemical, and other exploration methods, including drilling. Included in the expenditure are the costs of drilling exploratory oil and/or gas wells and the testing of such wells. Also included are the cost of access roads, site construction, permits, licences and similar fees, relevant office buildings and furniture, transportation equipment, storage facilities, plant and equipment, and review work, where these are undertaken primarily for purposes of exploration for deposits of petroleum. Details of developmental oil and/or gas wells are excluded.

### Operations

The following tables show particulars of expenditure, and wells and footage drilled in petroleum exploration in recent years.

#### EXPENDITURE ON PETROLEUM EXPLORATION BY PRIVATE ENTERPRISE AND BY GOVERNMENTS: AUSTRALIA, 1967 TO 1971 (\$'000)

	1967	1968	1969	1970	1971
<b>PRIVATE SOURCES(a)</b>					
Utilised in—					
New South Wales . . . . .	1,284	1,126	2,473	2,597	287
Victoria . . . . .	15,892	19,538	18,415	11,538	1,453
Queensland . . . . .	5,875	5,178	7,058	5,474	3,011
South Australia . . . . .	6,257	2,979	3,669	6,431	7,084
Western Australia . . . . .	11,788	21,532	26,194	29,557	41,872
Tasmania . . . . .	2,424	999	1,837	4,708	1,939
Northern Territory . . . . .	6,978	6,222	7,064	13,753	17,250
<i>Australia</i> . . . . .	<i>50,497</i>	<i>57,573</i>	<i>66,711</i>	<i>74,059</i>	<i>72,896</i>
<b>GOVERNMENT SOURCES</b>					
Payments under <i>Petroleum Search Subsidy Act</i> 1959–1969—					
Utilised in—					
New South Wales . . . . .	516	474	548	406	225
Victoria . . . . .	727	1,940	441	732	231
Queensland . . . . .	1,767	1,419	1,524	1,623	500
South Australia . . . . .	1,058	1,407	609	923	537
Western Australia . . . . .	3,441	4,027	6,286	4,604	3,590
Tasmania . . . . .	469	497	903	395	208
Northern Territory . . . . .	1,657	1,448	2,561	1,061	695
<i>Total subsidy payments, Australia</i> . . . . .	<i>9,635</i>	<i>11,213</i>	<i>12,871</i>	<i>9,744</i>	<i>5,986</i>
Utilised for—					
Geophysical . . . . .	4,512	3,590	3,557	2,924	2,470
Drilling . . . . .	5,123	7,622	9,315	6,820	3,517
Other Government sources—					
Commonwealth(a) . . . . .	4,508	4,756	4,238	3,841	4,696
State Mines Departments . . . . .	466	783	832	456	458
<i>Total other Government sources, Australia</i> . . . . .	<i>4,974</i>	<i>5,540</i>	<i>5,070</i>	<i>4,296</i>	<i>5,155</i>
<i>Total Government sources, Australia</i> . . . . .	<i>14,609</i>	<i>16,752</i>	<i>17,941</i>	<i>14,040</i>	<i>11,140</i>
<b>TOTAL FUNDS, PRIVATE AND GOVERNMENT</b>					
<i>Australia</i> . . . . .	<i>65,106</i>	<i>74,325</i>	<i>84,652</i>	<i>88,099</i>	<i>84,037</i>

(a) Excludes payments under the *Petroleum Search Subsidy Act* 1959–1969.



**SUMMARY OF EXPLORATION WELLS AND FOOTAGE DRILLED IN PETROLEUM  
EXPLORATION: STATES AND TERRITORIES, 1971**

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Total</i>
<b>Wells—</b>									
Drilled (i.e. those which reached final depth)—									
As oil producers . . . . .	No.	..	..	..	1	..	..	..	1
As gas producers . . . . .	No.	..	..	1	10	1	..	..	12
Plugged and abandoned . . . . .	No.	1(a)	2	17	9	29	1	3	62
<b>Total . . . . .</b>	<b>No.</b>	<b>1(a)</b>	<b>2</b>	<b>18</b>	<b>20</b>	<b>30</b>	<b>1</b>	<b>3</b>	<b>75</b>
Average final depth of wells drilled . . . . .	ft	321	4,966	5,115	8,785	8,363	4,665	8,638	7,460
Drilling still in progress at 31 December (uncompleted holes) . . . . .	No.	..	2	1	2	1	..	2	8
Wells drilled or drilling over 10,000 feet . . . . .	No.	..	..	..	7	14	..	2	23
<b>Footage drilled—</b>									
Completed wells . . . . .	ft	321	9,932	87,352	156,555	222,150	4,665	22,123	503,098
Uncompleted holes . . . . .	ft	..	302	6,870	15,605	10,857	..	16,230	49,864
<b>Total . . . . .</b>	<b>ft</b>	<b>321</b>	<b>10,234</b>	<b>94,222</b>	<b>172,160</b>	<b>233,007</b>	<b>4,665</b>	<b>38,353</b>	<b>552,962</b>

(a) Represents 4 shallow structure holes counted as one operation.

**SUMMARY OF EXPLORATION WELLS AND FOOTAGE DRILLED IN PETROLEUM  
EXPLORATION: AUSTRALIA, 1967 TO 1971**

		<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
<b>Wells—</b>						
Drilled (i.e. those which reached final depth)—						
As oil producers . . . . .	No.	4	1	..	2	1
As gas producers . . . . .	No.	7	4	6	15	12
Plugged and abandoned . . . . .	No.	72	78	101	108	62
<b>Total . . . . .</b>	<b>No.</b>	<b>83</b>	<b>83</b>	<b>107</b>	<b>125</b>	<b>75</b>
Average final depth of wells drilled . . . . .	ft	5,575	6,135	6,170	5,361	7,460
Drilling still in progress at 31 December (uncompleted holes) . . . . .	No.	8	8	11	8	8
Wells drilled or drilling over 10,000 ft . . . . .	No.	11	13	24	19	23
<b>Footage drilled—</b>						
Completed wells . . . . .	ft	373,336	453,318	604,683	631,732	503,098
Uncompleted holes . . . . .	ft	48,332	57,729	70,922	52,710	49,864
<b>Total . . . . .</b>	<b>ft</b>	<b>421,668</b>	<b>511,047</b>	<b>675,605</b>	<b>684,442</b>	<b>552,962</b>

### Mineral processing and treatment

The extraction of minerals from ore deposits, as in mining and quarrying, is only part of the wider field of mineral technology. It is only in rare instances that minerals can be used directly in the form in which they are produced by mines, and, much more commonly, minerals must undergo considerable processing and treatment before their full utility and value can be realised. Examples of this processing and treatment are the smelting and refining of metals, the production of coke from coal, the refining of oil, and the treatment of non-metallic minerals as in the production of superphosphate and other chemicals and building materials like bricks and cement. The sectors of the economy which carry out this work are classified for statistical purposes to the manufacturing industry, and particulars relating to those activities which principally involve mineral processing and treatment—i.e. the treatment of non-metalliferous mine and quarry products, the manufacture of mineral oils and chemical fertilisers, the smelting, converting, refining and rolling of iron and steel, the extracting and refining of other metals, and the manufacture of alloys are given in Chapter 21, Manufacturing Industry.

#### Principal products

The following table shows particulars of the production of certain important manufactured products of mineral origin during the years 1966–67 to 1971–72.

**PRODUCTION OF PRINCIPAL MANUFACTURED PRODUCTS  
OF MINERAL ORIGIN: AUSTRALIA, 1966-67 TO 1970-71**

(recorded in imperial units)

Commodity	1966-67	1967-68	1968-69	1969-70	1970-71
<b>METALS(a)</b>					
Non-ferrous—					
Alumina . . . . . tons	474,716	1,136,208	1,591,802	1,995,474	2,366,673
Refined aluminium . . . . . "	92,826	87,733	109,998	165,709	214,797
Blister copper(b) . . . . . "	77,788	75,344	109,582	108,852	128,143
Refined copper . . . . . "	74,313	72,166	94,732	103,680	113,500
Lead bullion (for export)(b) . . . . . "	84,690	101,477	132,218	169,007	176,590
Refined lead . . . . . "	192,384	186,908	175,664	185,366	152,490
Refined zinc . . . . . "	197,030	187,325	228,198	257,674	249,753
Refined tin . . . . . "	3,224	3,955	3,960	4,637	5,848
Ferrous—					
Pig iron(c) . . . . . '000 tons	4,893	5,209	5,703	5,862	6,142
Steel ingots(c) . . . . . "	6,114	6,287	6,705	6,874	6,693
Precious—					
Refined gold(d) . . . . . '000 f oz	726	655	622	527	464
Refined silver . . . . . "	9,825	9,693	9,428	10,581	8,162
<b>FUELS</b>					
Coal products—					
Metallurgical coke . . . . . '000 tons	3,365	3,678	3,647	3,969	4,470
Brown coal briquettes . . . . . "	1,820	1,745	1,471	1,539	1,376
Petroleum products—					
Motor spirit . . . . . mil. gal	1,763	1,897	2,032	2,110	2,230
Furnace fuel . . . . . '000 tons	5,759	6,206	6,113	5,987	5,700
Automotive distillate . . . . . "	2,167	2,344	2,579	2,954	3,127
Industrial diesel fuel . . . . . "	901	984	1,038	1,080	1,102
<b>BUILDING MATERIALS</b>					
Clay bricks . . . . . millions	1,361	1,440	1,627	1,694	1,669
Portland cement . . . . . '000 tons	3,661	3,805	4,075	4,428	4,611
Plaster of paris . . . . . "	261	278	282	298	304
Plaster sheets . . . . . '000 sq yd	30,601	32,809	31,434	35,748	41,100
<b>CHEMICALS</b>					
Sulphuric acid . . . . . '000 tons	1,991	1,892	1,851	1,734	1,586
Caustic soda . . . . . tons	91,009	98,190	105,478	110,659	117,788
Superphosphate(e) . . . . . '000 tons	4,430	3,935	3,879	3,522	3,066

(a) Excludes secondary metal with the exception of pig iron and steel ingots. (b) metallic content. (c) Year ended 31 May. (d) Newly-won gold of Australian origin. (e) Includes double and triple superphosphate and ammonium phosphate expressed in terms of single superphosphate i.e. 22% P<sub>2</sub>O<sub>5</sub> equivalent.

## Overseas trade

### Exports and imports

Data of imports and exports of minerals and mineral products have been extracted from the official trade statistics compiled in the Commonwealth Bureau of Census and Statistics. Particulars of the quantities and values (\$f.o.b. port of shipment) of the principal minerals and mineral products exported from and imported into Australia during the years 1969-70 to 1971-72 are shown in the following table

**EXPORTS AND IMPORTS OF PRINCIPAL MINERALS AND MINERAL PRODUCTS  
AUSTRALIA, 1969-70 TO 1971-72**

Commodity(a)	Quantity			Value (\$'000 f.o.b.)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
<b>EXPORTS(b)</b>						
Non-ferrous—						
Copper—						
Concentrate . . . . . tonnes	65,110	140,218	141,395	14,620	32,031	27,298
Blister . . . . . "	8,030	6,972	5,868	13,256	8,992	6,643
Refined . . . . . "	38,624	36,014	56,519	54,733	35,521	51,395
Matte, slags, etc. . . . . "	12,600	8,371	5,210	6,889	3,332	1,571
Lead—						
Concentrate . . . . . "	121,385	83,096	93,537	23,320	16,290	15,961
Bullion . . . . . "	169,755	179,811	137,865	60,461	56,455	38,279
Refined . . . . . "	161,617	123,155	130,345	42,944	29,023	28,230
Slags and residues . . . . . "	3,240	3,035	2,342	934	586	423
Zinc—						
Concentrate . . . . . "	437,120	387,334	364,147	30,503	25,739	26,184
Refined . . . . . "	154,717	136,664	190,428	38,736	35,671	56,825
Slags and residues . . . . . "	5,540	5,853	5,809	373	513	504
Tin—						
Concentrate . . . . . "	7,144	6,343	9,249	10	7,636	11,963
Refined . . . . . "	566	1,450	2,156	1,791	4,535	6,573
Aluminium—						
Alumina . . . . . '000 tonnes	n.a.	1,807	2,626	n.a.	95,125	132,042
Refined . . . . . tonnes	50,522	79,661	96,313	22,972	35,962	38,886
Ferrous and alloy—						
Iron ore—						
Pellets . . . . . '000 tonnes	5,129	5,628	5,420	58,830	62,802	58,274
Fines . . . . . "	7,730	13,478	18,081	48,731	81,101	105,885
Lump . . . . . "	20,918	29,215	26,738	170,249	231,485	211,330
Tungsten—						
Scheelite concentrate . . . . . tonnes	1,432	1,224	1,789	4,225	3,607	4,332
Wolfram concentrate . . . . . "	964	1,002	736	3,494	4,100	2,066
Pig iron . . . . . "	311,069	389,722	527,856	15	21,587	23,581
Steel ingots, blooms . . . . . "	451,203	117,210	296,275	31	9,596	18,967
Mineral sands—						
Ilmenite concentrate . . . . . "	596,214	641,060	530,933	5,888	6,471	5,628
Rutile concentrate . . . . . "	346,435	380,922	314,770	30,209	36,399	36,116
Zircon concentrate . . . . . "	351,039	363,160	364,343	13,489	13,200	13,038
Precious—						
Gold, refined . . . . . '000 grams	14,619	2,250	3,717	16,265	2,305	4,573
Silver, refined . . . . . "	247,025	247,586	211,574	13,350	12,237	9,033
Coal, black . . . . . '000 tonnes	17,623	18,997	21,826	164,497	193,725	237,592
Crude oil(c) . . . . . '000 cu m	..	1,091	241	..	2,760	14,207
<b>IMPORTS</b>						
Tin, refined . . . . . tonnes	105	119	104	347	376	325
Nickel (pigs, anodes, etc.) . . . . . "	1,490	2,138	1,241	5,372	8,781	3,178
Ferro-alloys . . . . . "	31,080	37,841	27,941	12,748	11,660	8,234
Gold—						
Unrefined bullion(d) . . . . . '000 grams	4,021	3,212	3,202	4,146	3,416	3,794
Refined . . . . . "	1,936	254	17	2,389	232	27
Crude oil(e) . . . . . '000 cu m	23,168	13,689	10,960	200,356	121,325	115,101
Asbestos . . . . . tonnes	59,373	71,681	61,665	8,572	10,705	9,852
Diamonds—						
Industrial . . . . . metric carats	963,226	744,802	567,075	3,626	3,106	2,360
Gemstone . . . . . "	33,826	49,847	44,016	5,447	6,573	6,331
Phosphate rock . . . . . '000 tonnes	2,790	2,108	1,643	27,875	22,174	18,157
Potassium fertilisers . . . . . tonnes	129,391	153,268	145,912	3,432	4,793	4,118
Sulphur . . . . . "	434,157	273,341	276,745	10,786	4,906	4,637

(a) In addition to the commodities listed, significant quantities of bauxite and nickel ores and concentrates are exported but details are not available for publication. (b) Quantities shown for metallic minerals are gross quantities, not metallic contents. (c) Includes also partly refined oil, topped crudes and enriched crudes. (d) Gold content. (e) Includes also partly refined oil, topped crudes, enriched crudes and refinery feed stock.



Considerable quantities of metallic ores, concentrates, slags, and residues are exported from Australia for refining overseas. The following table shows selected items exported during 1970-71 and 1971-72 and their principal metallic content as estimated by assay.

**PRINCIPAL METALLIC CONTENTS OF SELECTED ORES AND CONCENTRATES  
ETC., EXPORTED FROM AUSTRALIA, 1970-71 AND 1971-72**

	Metallic contents—estimated from assay							
Ores and concentrates, etc.	Copper	Lead	Zinc	Tin	Iron	Tungstic oxides	Gold	Silver
1970-71								
	tonnes	tonnes	tonnes	tonnes	'000 tonnes	tonnes	'000 grams	'000 grams
Copper concentrate . . .	33,447	..	..	109	..	..	841	6,937
Blister copper . . .	6,941	..	..	..	..	..	1,694	1,234
Copper matte, slags, etc.(a) .	2,967	4,281	27	..	..	..	1	6,608
Lead concentrate . . .	1,303	55,188	5,529	..	..	..	4,271	59,724
Lead bullion . . .	187	178,617	..	..	..	..	..	299,635
Lead slags and residues . .	191	2,047	38	17	..	..	..	330
Zinc concentrate . . .	..	2,271	201,141	..	..	..	..	2,420
Zinc slags and residues . .	..	..	4,133	..	..	..	..	..
Tin concentrate . . .	4	5	..	2,733	..	..	..	..
Iron ore—								
Pellets . . . . .	..	..	..	..	3,692	..	..	..
Fines . . . . .	..	..	..	..	8,640	..	..	..
Lump . . . . .	..	..	..	..	18,865	..	..	..
Scheelite concentrate . . .	..	..	..	..	..	859	..	..
Wolfram concentrate . . .	..	..	..	2	..	679	..	..
Total metallic content .	45,040	242,409	210,868	2,861	31,197	1,538	6,806	376,888
1971-72								
Copper concentrate . . .	34,163	..	..	112	..	..	664	7,867
Blister copper . . .	5,745	..	..	..	..	..	1,219	600
Copper matte, slags, etc.(a) .	1,472	2,280	..	1	..	..	..	3,824
Lead concentrate . . .	2,552	55,236	10,012	..	..	..	1,248	92,971
Lead bullion . . .	2	136,929	..	..	..	..	..	296,206
Lead slags and residues . .	372	1,354	65	36	..	..	..	742
Zinc concentrate . . .	..	2,487	189,398	..	..	..	..	2,597
Zinc slags and residues . .	..	20	4,074	..	..	..	..	..
Tin concentrate . . .	4	..	..	4,440	..	..	..	..
Iron ore—								
Pellets . . . . .	..	..	..	..	3,499	..	..	..
Fines . . . . .	..	..	..	..	11,240	..	..	..
Lump . . . . .	..	..	..	..	17,435	..	..	..
Scheelite concentrate . . .	..	..	..	..	..	1,033	..	..
Wolfram concentrate . . .	..	..	..	..	..	532	..	..
Total metallic content .	44,310	198,306	203,549	4,589	32,174	1,565	3,132	404,808

(a) Includes copper matte, copper slags and residues and copper-lead dross and speiss.

## Prices

The following table shows average prices of some principal refined metals and ores and concentrates on Australian and certain major overseas markets. Prices of minerals such as iron ore, coal and bauxite are not shown, as these minerals are commonly sold on a contract basis rather than on an open market basis.

**AVERAGE DAILY PRICES OF SELECTED METALS AND METALLIC ORES AND CONCENTRATES: AUSTRALIAN AND OVERSEAS MARKETS, 1967-68 TO 1971-72**

(Source: Bureau of Mineral Resources, Geology and Geophysics)

Detail	Units	1967-68	1968-69	1969-70	1970-71	1971-72
<b>METALS(a)</b>						
Aluminium—						
Australia . . . . .	\$A-ton	520.90	538.00	564.90	578.00	578.00
United States . . . . .	USc-lb	25.1	26.4	27.9	29.0	26.6
Copper—						
Australia . . . . .	\$A-ton	1,132.10	1,126.50	1,500.10	1,087.40	976.60
London Metal Exchange	£Stg-tonne	(b)511.5	(b)516.7	671.8	477.7	427.9
Lead—						
Australia . . . . .	\$A-ton	210.00	234.30	283.50	262.40	237.90
London Metal Exchange	£Stg-tonne	(b)92.0	(b)109.3	132.2	114.7	106.7
United States . . . . .	USc-lb	13.84	13.46	16.10	14.60	14.72
Zinc—						
Australia . . . . .	\$A-ton	258.00	266.10	291.20	295.70	343.00
London Metal Exchange	£Stg-tonne	(b)105.3	(b)114.0	123.9	121.3	141.4
'Producers' . . . . .	£Stg-ton	108.0	115.8	127.3	128.8	150.0
United States . . . . .	USc-lb	13.50	13.84	15.30	15.25	17.21
Tin—						
Australia . . . . .	\$A-ton	3,007.80	3,063.20	3,463.80	3,344.90	3,306.30
London Metal Exchange	£Stg-tonne	(b)1,274.9	(b)1,363.6	1,524.6	1,476.7	1,435.8
Straits . . . . .	\$Mal-picul	577.8	585.6	669.7	643.1	629.7
Nickel—						
United Kingdom . . . . .	£Stg-tonne	837.0	(b)944.0	1,123.7	1,231.1	1,246.5
Gold—						
Premium markets—						
Australia . . . . .	\$A-f oz	(c)36.42	36.83 }	'33.50	33.76	39.74
Overseas . . . . .	\$A-f oz	32.54	36.17 }			
United Kingdom . . . . .	\$US-f oz	(d)	41.28	37.40	37.87	46.89
Silver—						
United Kingdom . . . . .	Stg new pence-f oz	(e)195.2	(e)198.6	(e)179.1	70.3	58.6

**ORES AND CONCENTRATES**

Tin—						
Australia . . . . .	\$A-ltu	25.81	25.98	30.90	28.66	28.21
Wolfram—						
United Kingdom . . . . .	£Stg-mtu (f)	14.75-21.13 (f)	18.00-22.50 (f)	21.00-48.00 (f)	22.80-36.75	14.00-22.00
Rutile—						
Australia . . . . .	\$A-ton	88-96	88-124	124-150	145-150	115-150
United Kingdom . . . . .	£Stg-tonne (b)	43.00-50.00	48.50-66.00	66.00-79.00	74.78-79.72	64.00-79.72
Ilmenite—						
Australia . . . . .	\$A-ton	9.00-10.00	9.00-10.00	9.00-11.00	11.00	11.00-12.00
United Kingdom . . . . .	£Stg-tonne (b)	7.00-9.50	7.50-9.50	7.50-9.50	7.38-11.32	9.35-11.32
Zircon—						
Australia . . . . .	\$A-ton	46-50	42-50	35-47	35-39	35-39
United Kingdom . . . . .	£Stg-tonne (b)	25.00-30.00	26.25-30.00	25.25-27.75	24.85-28.05	26.82-28.05

(a) Where a daily price does not actually exist for a commodity, daily prices have been imputed from price data which are available. (b) £Stg per ton. (c) May and June 1968 only; prior to May 1968 there was no Australian premium market. (d) Not available owing to break in continuity of series; from April 1968 London Gold Market transactions have been in non-monetary gold only. (e) d Stg per f oz. (f) £Stg-ltu.

Details of monthly prices, and price specifications, relating to each commodity in this table, are contained in each issue of the monthly mimeographed bulletin *Minerals and Mineral Products* (10.19).

## REVIEW OF RECENT DEVELOPMENTS IN THE AUSTRALIAN MINERAL INDUSTRY

Prior to Year Book No. 52 it was customary to include a series of detailed reviews of the principal commodities produced by the Australian mineral industry and recent developments concerning these commodities. However, with the increasing diversification and development of the industry, it has become impractical to continue these reviews in the Year Book and the reader who wishes to obtain information of this kind is referred to *The Australian Mineral Industry—Annual Review* published by the Bureau of Mineral Resources, Geology and Geophysics. That publication contains comprehensive reviews of mineral commodities of importance to the Australian economy, as well as a general review of the industry's performance during each year. Major developments in the industry, particularly during the last year, are reviewed briefly in subsequent parts of this section.

Most sectors of the Australian mining industry reflected the improving world situation in 1972 and continued expansion of output of bauxite, black coal, copper, iron ore, nickel, and petroleum resulted in a record level of mine production. Although a new record was established in 1972 in the ex-mine value of minerals produced at about \$1,780 million, a rise of 7.8 per cent, there has been an easing in the rate of expansion of the industry in recent years. However, the operating rates of mining and processing facilities moved closer to full capacity during 1972.

### Bauxite

The history of the aluminium industry and recent significant developments in the industry were reviewed in previous issues of the Year Book (No. 51, page 1168 and No. 52, page 1048). The year 1972 was a period of continued growth in the industry both in mining and processing as detailed below.

In 1972 bauxite production capacity from deposits at Weipa, Queensland, increased to a rate of 10.5 million tons per annum following completion of a further stage in the development of the mine and associated township, and of ore treatment and loading facilities. Approximately 3 million tons from Weipa were used by the Gladstone, Queensland, alumina refinery in 1972, and the requirements of the small refinery at Bell Bay, Tasmania, are estimated as 120,000 tons yearly; the remaining production is available for export.

Bauxite deposits at Gove, Northern Territory, covering reserves of the order of 250 million tons of ore, are being developed by a consortium of seven Australian and one overseas companies. The consortium has commissioned an alumina plant at Gove with an initial capacity of 500,000 metric tons per annum to increase to 1,000,000 metric tons annually by mid-1973.

The Mitchell Plateau (Admiralty Bay, Kimberley area), Western Australian bauxite/alumina project has been postponed, chiefly because of the world recession in the industry in 1971 and 1972. The second bauxite/alumina project based on the Darling Range bauxites, involves an alumina refinery at Worsley, 140 miles south of Perth, and port facilities at Bunbury. The \$300 million project will see the expenditure of more than \$9 million on building a new railway and \$1.9 million on harbour development at Bunbury. The first stage of the alumina refinery at Worsley will be completed in 1977 and have an initial capacity of 350,000 tons per year. This will be expanded to 1.2 million and possibly eventually to 2 million tons per year. Bauxite reserves in the Mount Saddleback area have been reported as 240 million tons with an average grade of 32 per cent  $\text{Al}_2\text{O}_3$ . Mining will start at Bodlungton, about 80 miles south of Perth.

In the third bauxite/alumina project in Western Australia, bauxite will be mined from the Chittering area in the Darling Range, Western Australia, for an alumina refinery to be built near Muchea. Completion date for the refinery is January 1977 and initial annual production capacity will be 400,000 tons with eventual capacity at 1.2 million tons annually.

### Alumina

Expansion of the alumina refinery at Gladstone, Queensland, was completed by the end of 1968, increasing the capacity of the refinery to 900,000 tons per annum; the plant has since been expanded to 1,275,000 tons yearly and will be increased further to 2,000,000 tons per annum by late 1973. The alumina refinery at Kwinana, Western Australia, was expanded from 817,000 tons to 1,040,000 tons annually by July 1970 and to 1,250,000 tons by the end of 1970. Bauxite supplies for the Kwinana refinery are obtained from deposits 30 miles away at Jarrahdale, Western Australia, the reserves of which are assessed as at least 500 million tons. A new alumina plant was also commissioned at Pinjarra, Western Australia, in May 1972, with an initial production capacity of 210,000 tons yearly. An alumina plant, with a capacity of 1,600,000 tons annually, is planned at Weipa in 1976.



### Copper

Copper production at Mount Isa will be increased to a rate of 153,000 tons yearly in 1973. The expansion program provides for a new hoisting shaft, extensions to the existing copper smelter and a new concentrator, as well as enlargement of ancillary facilities.

A new copper-gold ore body at Warrego has been developed near Tennant Creek, Northern Territory. The first stage of development cost \$21 million; it has an installed mining capacity of 500,000 tons of ore per annum and production commenced in 1973.

Since the beginning of 1967 the Australian producers' price has been adjusted regularly to reflect movements in the London Metal Exchange daily settlement price. From January to June 1972 the Australian price ranged from 41–45 cents per pound (\$918.40–\$1,008.00 per ton). On 1 July 1972 a new method of quotation was adopted and the price remained at \$925.94 per tonne (42 cents per pound) until 11 February 1973 when it rose, reaching \$1,100 per tonne on 22 March 1973.

### Iron

The major development of recent years has been the establishment in Australia of a large scale iron ore export industry based principally on steelmaking requirements in Japan. Exports of iron ore and iron ore pellets in 1971–72 to Japan and elsewhere were 49 million tons valued at \$375 million.

Commercial output from Paraburdoo, originally scheduled for 1972, was postponed until 1973 because of a reduced demand for ore.

A \$10 million expansion of the Robe River mining operation will be implemented in 1973, one year ahead of schedule. Export of Robe River iron ore fines and pellets from Cape Lambert commenced in 1972 and shipments are expected to increase to an annual rate of 6.1 million tons of fines and 4.2 million tons of pellets by 1975. At Mount Whaleback expansion of iron ore production and shipment capacity will proceed to reach 30 million tons per year by the end of 1973. Shipments of ore from the Mount Goldsworthy group of mines were expected to increase to an annual rate of 8 million tons after April 1973 following the opening of the Shay Gap and Sunrise Hill mines. A 43-mile railway extension has been constructed from Mount Goldsworthy to Shay Gap rail-head.

### Lead and zinc

Production of lead metal rose in 1972. Metal production should rise in 1973 and there may be a surplus. Supply and demand for zinc metal in 1973 should be balanced.

The South Mine at Broken Hill was not operating profitably and ore production was terminated in July 1972; retreatment of residue dumps continued. The mine was purchased by another company in October 1972.

Lead production at the reduced rate adopted in 1971 continued at Mount Isa but zinc concentrate production increased because of the higher zinc content of ore treated.

A record tonnage of zinc metal was produced in 1971–72 at the Risdon (Tasmania) refinery on completion of the expansion program. Output is expected to reach 185,000 tons in 1972–73.

### Black coal

There has been a significant revival in the Australian black coal industry in recent years as a result of increased exports and increased consumption of black coal in iron and steel production and electricity generation. These increases have more than balanced reduced consumption in some applications due to competition from fuel oil.

The expansion of the export trade has been of major significance. In 1955 exports were about 200,000 tons valued at about \$1.7 million; in 1972 exports were 23.1 million tons valued at \$269 million. These increased exports have been largely to Japan for use in the iron and steel industry. As a result of this increased demand, new mines have been opened and others are under development in Queensland and New South Wales, and many established mines are being expanded. Exploration for coal has been stimulated and further rich deposits of coking coal have been located, particularly in Queensland.

### Petroleum

At the end of 1972, there were seven Australian oil fields in production, namely, Moonie, Alton and Bennett, Queensland; Barrow Island, Western Australia; and Barracouta, Kingfish, and Halibut in the Gippsland Shelf area offshore from Victoria. In addition, a small amount of oil is being produced from several other wells in the Surat Basin in Queensland. In 1969 commercial and domestic

use of natural gas began in Brisbane, Melbourne and Adelaide and in late 1971, in Perth. The production of crude oil in 1972 from the Australian oil fields was 119 million barrels representing some 64 per cent of the country's requirement of refinery feedstock. The cumulative production of crude oil to 31 December 1972 amounted to 340 million barrels.

In 1972 gas discoveries were made at various locations in the Cooper Basin in South Australia and Queensland, and at Big Lake and Fly Lake in South Australia. Additional discoveries were also made at Goodwyn, North Rankin, and Angel on the northwest continental shelf of Western Australia. Additional oil discoveries were made at Tirrawarra in the Cooper Basin, Goodwyn and Eagle Hawk on the North-west Shelf and Mackerel in the Gippsland Basin offshore from Victoria. The provisional figure for footage drilled in petroleum exploration and development in Australia in 1972 was 971,387 feet which is some 210,573 feet (about 28 per cent) more than the footage drilled in the previous year. About 735,491 feet of the 1972 total was attributable to exploration drilling of which 388,151 feet were drilled offshore. A total of 135 wells were completed in 1972, of which 99 were exploration wells, 38 of them offshore. In comparison with the previous year there was a rise of 14 in the number of exploration wells and a decline of 15 development wells in 1972. There was a rise of 24 in the number of offshore exploratory wells which also made a significant contribution to the rise in drilling activity. Of the exploration wells drilled, 1 was completed as a potential oil producer and 9 as gas producers; of the development wells, 3 were oil producers and 23 gas producers.

### Nickel

Output from Australia's major nickel mining operation at Kambalda in Western Australia has grown to more than 35,000 tons of contained nickel per annum since mining commenced in 1967. Mines at Nepean and Scotia also commenced production in early 1969 and that at Windarra will commence production in 1974; mines have been developed at Carr Boyd Rocks and in the Widgiemooltha area and it is possible that one will be developed at Redross in 1974. At the end of 1972 the refinery at Kwinana, Western Australia, was producing more than 15,000 tons of nickel metal per annum from concentrates; the remaining concentrates will continue to be exported until further smelting and refining facilities are constructed. The flash smelter commissioned at Kalgoorlie in December 1972 will be capable of processing 209,000 tons of concentrate a year. Capacity will be increased by 75 per cent when certain modifications are made. The matter produced is feed for the Kwinana refinery and overseas refineries.

Plans have been drawn for the development of the lateritic nickel deposit at Greenvale in northern Queensland. Following the successful completion of pilot plant tests, construction of a railway and an ammonia leach treatment plant at Townsville, northern Queensland, were commenced in early 1972. Production of 23,000 tons of nickel oxide sinter per annum could commence during 1974.

### Mineral sands

The history of the mineral sands industry and an assessment of resources is presented in the *Australian Mineral Industry—Quarterly Review* Vol. 25 No. 1.

The first mineral sand separation plant at Eneabba, Western Australia, commenced production in early 1973. The initial capacity is 7,000 tons of rutile, 15,000 tons of zircon and 28,000 tons of ilmenite per year. If this initial plant demonstrates the viability of a large-scale operation, a plant may be built with production capacity at an annual rate of 50,000 tons of rutile, 100,000 tons of zircon and 200,000 tons of ilmenite. A second plant with a capacity of 240,000 tons per year, at a cost of \$10 million, is planned and two other companies are carrying out testing programs and feasibility studies in the Eneabba area.

The ilmenite beneficiation plant at Capel, Western Australia, which has operated on a semi-commercial scale since 1968 is being extended to produce 40,000 tons of upgraded ilmenite per year. A plant for the upgrading of ilmenite is being built at Bunbury, Western Australia.

### Phosphate

Major deposits of phosphate rock were discovered during 1966 near Duchess and Lady Annie in north-west Queensland. The deposits are large by world standards, and feasibility studies are still in progress. Survey work has been finished on a possible railway route between Lady Annie and the Gulf of Carpentaria, 800 miles away. Transport and port facilities will be key factors in determining whether the project is to be undertaken.

## CHAPTER 27

# ELECTRIC POWER GENERATION AND DISTRIBUTION

This chapter is divided into three major parts: the Introduction, which deals briefly with the resources, generation and distribution, and future development of electric power in Australia; the Snowy Mountains Hydro-electric Scheme; and the origins, development, present situation and new projects of electrical systems in each Australian State and internal Territory.

The information contained in the chapter relates to situations existing and projects contemplated in June 1973, and may be considerably affected by changes in policy or plans, or by developments in the projects themselves. Greater descriptive and historical detail about the various systems is contained in earlier issues of the Year Book. Statistics on the electricity industry are included in tables in Chapter 21, Manufacturing Industry.

## INTRODUCTION

### Distribution of population and location of electric power resources in Australia

The two principal centres of population and industry in Australia, the metropolitan areas of Sydney and Melbourne, make the greatest demands for electric power, and their growth has been associated with the development of large deposits of coal located relatively close to the source of demand. This, together with the fact that the major water resources are also located in the south-eastern portion of Australia, materially influences the distribution of industrial population and the location of major electric power stations. By far the most important source of energy used in the production of electric power in Australia is coal. At 30 June 1972 thermal power equipment represented 71.6 per cent, hydro plant 26.0 per cent, and internal combustion and gas turbine equipment 2.4 per cent of the total installed generating capacity.

Most of Australia is poorly supplied with water, only about 13 per cent receiving an annual rainfall of 30 inches or over, and these areas are confined largely to Tasmania and to the narrow coastal strip along the east coast of the mainland. The only region on the mainland of Australia high enough to receive reliable winter snowfall, and from which, therefore, reasonably constant water supplies throughout the year can be expected, is the mountain chain which stretches from the high plateaux of south-eastern New South Wales to the north-eastern highlands of Victoria. The hydro-electric potential of this area is considerable, and plans have been formulated to develop more than 4,000,000 kW by 1975. The two major construction projects in this area are the Snowy Mountains and Kiewa schemes. Other hydro-electric potential does exist on the mainland on the rivers of the coastal areas of New South Wales and Queensland, but the amount available is smaller than the potential of the Alpine region. In Tasmania, hydro-electric resources have been estimated at about 50 per cent of the total Australian hydro-electric potential. On the mainland the chief source of energy is coal; in Tasmania it is water.

### Electric power generation and distribution

At the beginning of this century Australia's electrical undertakings were carried on mainly by private enterprise, but with some measure of government control designed to provide standards of safety and to define the scope and obligations of the private organisations. A trend towards public ownership commenced during the 1914-18 War and became more pronounced after the 1939-45 War. By 1961 all major generating stations supplying the public were, in varying degrees, under the control of statutory organisations constituted with the object of unifying and co-ordinating the generation and distribution of electricity supplies. There are still a large number of small private and municipal enterprises generating power for supply to country towns, although central authorities are extending supply to these places wherever practicable. In many areas it has been, and remains, the practice for central authorities to sell power in bulk to local distributing organisations which undertake reticulation.

In addition to the private, local government and statutory organisations which generate and or distribute electricity for sale, numerous firms generate power for use in their own establishments, particularly those engaged in mining remote from the main centres of population. This chapter, however, is concerned mainly with the activities of central electric stations, as the power regularly



produced for such internal consumption is, in any case, a relatively small proportion of the total power produced. The measures taken by authorities to satisfy the demand created by the post-war growth in population and building and by developments in industry and commerce are described in the following pages.

## SNOWY MOUNTAINS HYDRO-ELECTRIC SCHEME\*

### Snowy Mountains Hydro-electric Power Act 1949-1958

In July 1949 the Commonwealth Government established the Snowy Mountains Hydro-electric Authority, and empowered it to generate electricity by means of hydro-electric works in the Snowy Mountains Area; supply electricity to the Commonwealth (i) for defence purposes, (ii) for consumption in the Australian Capital Territory; and supply to a State, or to a State Authority, electricity not required for defence purposes or for consumption in the Australian Capital Territory.

The Snowy Mountains Act is supported by a detailed agreement between the States of New South Wales and Victoria and the Commonwealth with regard to the construction and operation of the Scheme, the distribution of power and water, charges to be made for electricity, and other such matters. The Snowy Mountains Council, established under the terms of the Agreement and consisting of representatives of the Commonwealth, the Authority and the two States, directs and controls the operation and maintenance of the permanent works of the Authority and the allocation of loads to generating stations.

### Snowy Mountains Hydro-electric Scheme

The broad basis of the Snowy scheme is to transfer waters, which would otherwise flow to the sea unharnessed, from the Snowy River and its tributaries to the inland system, so that the water may be used for irrigation and to provide power. It involves two main diversions, the diversion of the Eucumbene, a tributary of the Snowy, to the Upper Tumut River, and the diversion of the main stream of the Snowy River at Island Bend and Jindabyne to the Swampy Plain River. These two diversions divide the scheme geographically into two sections, the Snowy-Tumut Development and the Snowy-Murray Development (*see* plate 53 opposite). For purposes of both power production and irrigation it is necessary to regulate run-off, and this is achieved by the use of Lake Eucumbene (formed by the construction of Eucumbene Dam) and other storages to control the waters of the Eucumbene, Murrumbidgee, Tooma, and Tumut Rivers for the Snowy-Tumut Development and of the Snowy and Geehi Rivers for the Snowy-Murray Development. A sectional diagram of the scheme appears on plate 54, page 958.

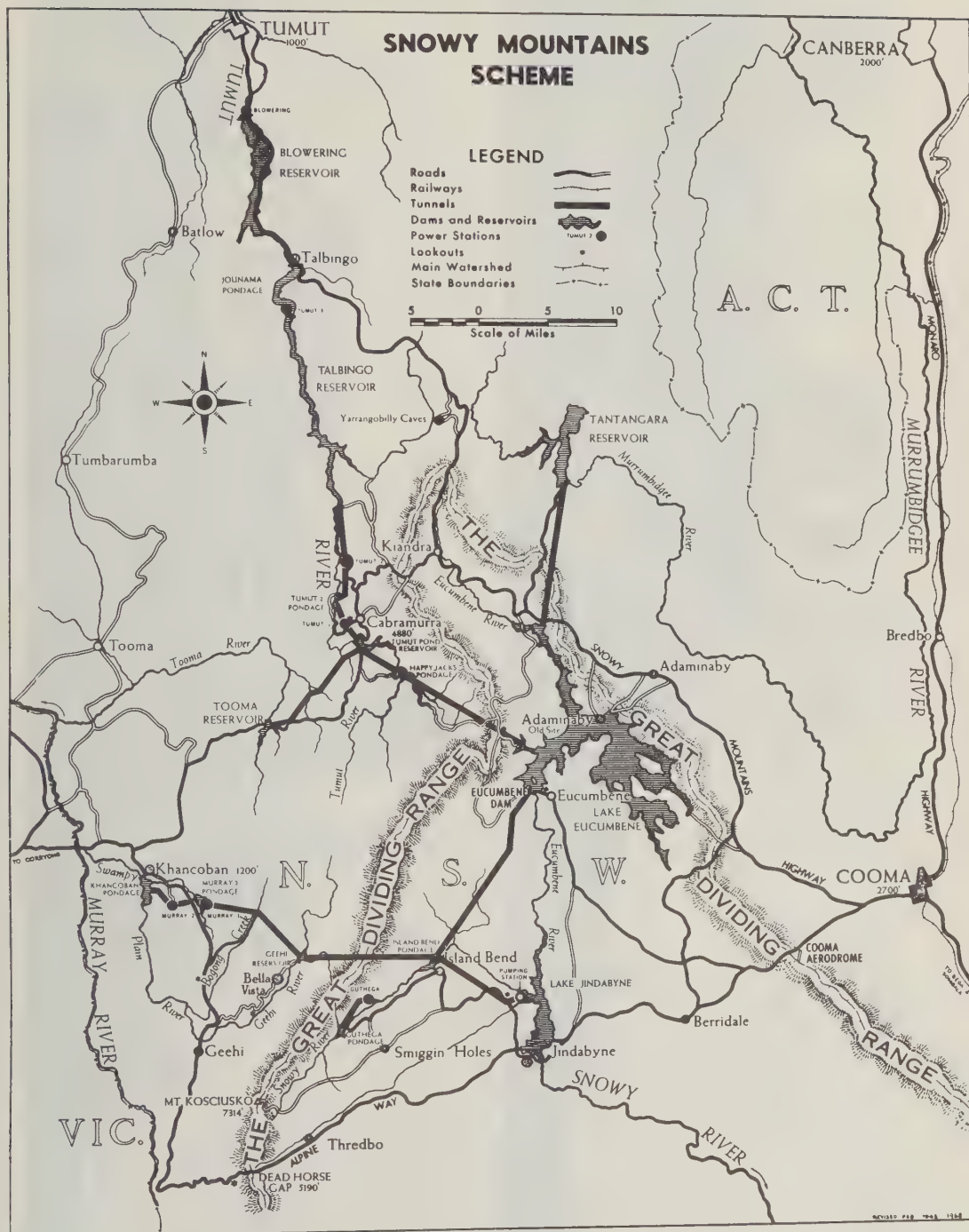
*Snowy-Tumut Development.* This development comprises works for the diversion and regulation of the waters of the Eucumbene, Upper Tooma, Upper Murrumbidgee, and Upper Tumut Rivers and their combined development through a series of power stations down the Tumut River. A major dam has been constructed on the Eucumbene River to create Lake Eucumbene, which has an ultimate usable storage of 3.5 million acre feet. The waters of the Upper Murrumbidgee River are diverted into Lake Eucumbene by a dam at Tantangara and a 10½-mile tunnel from Tantangara Reservoir. From Lake Eucumbene the water flows through a 14-mile tunnel to Tumut Pond Reservoir on the upper reaches of the Tumut River, where it joins the waters of the Tumut River itself and the waters of the Tooma River diverted to Tumut Pond Reservoir by a diversion dam and a 9-mile tunnel.

From Tumut Pond Reservoir water is conveyed by pressure tunnel to Tumut 1 underground Power Station (capacity 320,000 kW), returned to the Tumut River and then by another pressure tunnel to Tumut 2 underground Power Station (capacity 280,000 kW), thence discharging into Talbingo Reservoir, also on the Tumut River.

Tumut 3 Power Station, the largest station of the scheme (generating capacity 1,500,000 kW and pumping capacity 10,500 cubic feet per second) has been constructed below Talbingo Reservoir and discharges into Jounama Pondage on the Tumut River. This pondage provides a downstream pumping pool and also regulates discharges from Tumut 3 Power Station as required. Releases from Jounama Pondage then enter Blowering Reservoir formed by Blowering Dam. This dam, constructed by the Snowy Mountains Authority as an agent for the State of New South Wales, provides for the regulation of power station discharges for irrigation use in the Murrumbidgee Valley. The Authority has constructed a power station at the foot of the dam to generate power from releases of water for irrigation purposes.

*Snowy-Murray Development.* The principal features of the Snowy-Murray Development are the diversion of the main stream of the Snowy River by tunnels, shafts, and pipelines westwards through

\* *See also* Chapter 23 Water Conservation and Irrigation of this issue and special detailed article in Year Book No. 42, pp. 1103-30.



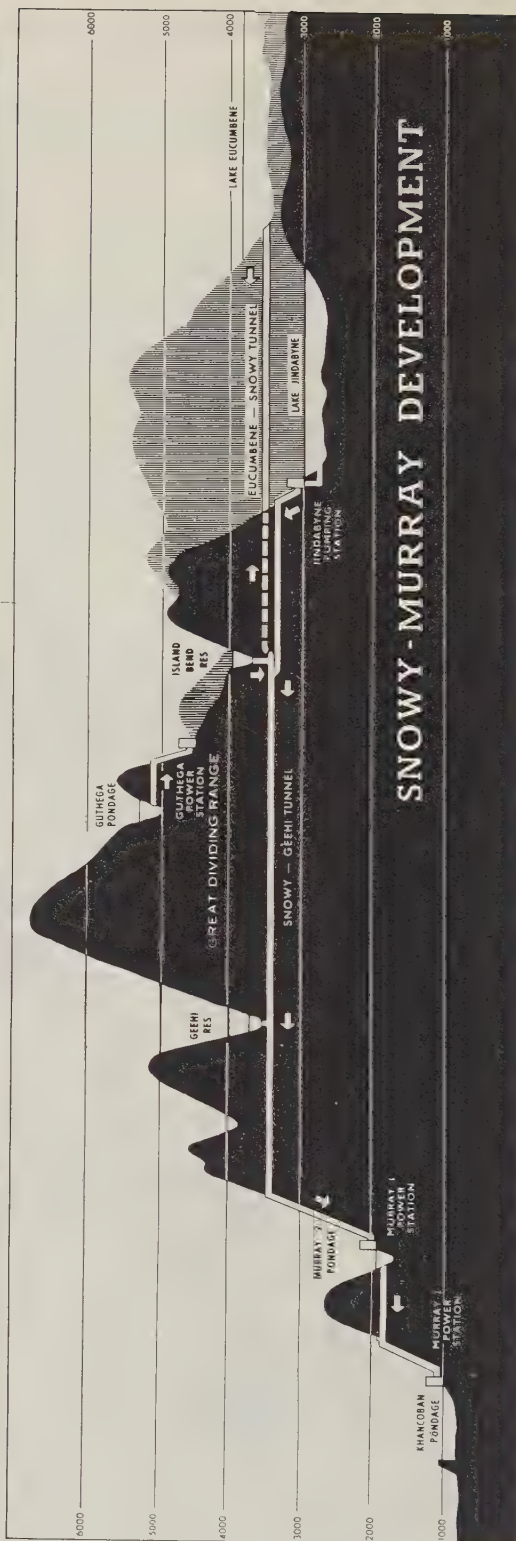
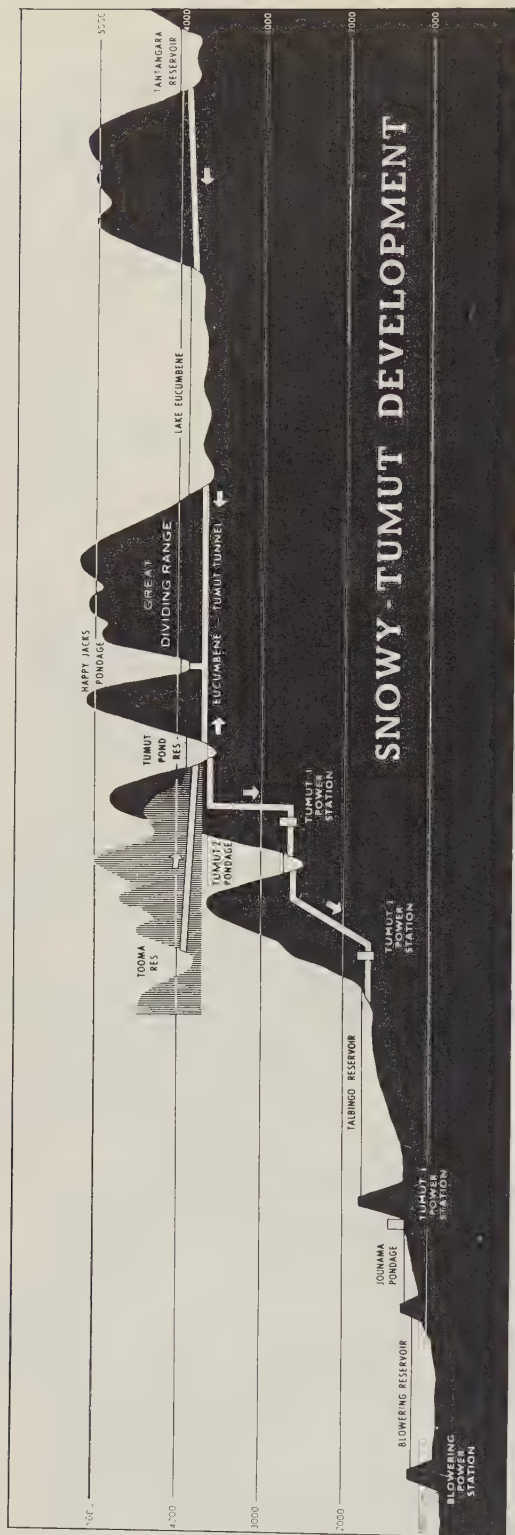


PLATE 54



the Great Dividing Range into the Swampy Plain River in the catchment of the Upper Murray, and the development of power on the western slopes of the Alps. The main works of the development are as follows.

- (a) A tunnel from the Snowy River near Island Bend through the Great Dividing Range to Geehi Reservoir on the Geehi River, and two power projects between Geehi Reservoir and the Swampy Plain River near Khancoban. The power stations associated with these two power projects, Murray 1 and Murray 2, have a combined capacity of 1,500,000 kW.
- (b) A tunnel from a dam on the Snowy River near Island Bend to Eucumbene Dam to carry Snowy water to Lake Eucumbene for storage at times of high river flows. When river flows are lower than average, this stored water is returned towards Island Bend and thence through the Snowy-Geehi Tunnel to Geehi Reservoir and Murray 1 and Murray 2 Power Stations.
- (c) A dam on the Snowy River near Jindabyne to store the residual flow of the Snowy and Eucumbene Rivers downstream from Island Bend and Eucumbene Dams, including the flows of major tributaries, the Crackenback and Mowamba Rivers; and a pumping plant, pipeline and tunnel to lift this water from Jindabyne Reservoir to the Snowy-Geehi Tunnel near Island Bend, where it joins the flow to the Geehi Reservoir for use through Murray 1 and Murray 2 Power Stations.

The power output of this section of the Scheme is increased by the Guthega Project, a subsidiary hydro-electric project on the Upper Snowy River above Island Bend with a generating capacity of 60,000 kW.

#### Utilisation of power from scheme

The future electric power plants on the mainland of Australia will be predominantly thermal or thermo-nuclear installations, and in an electrical system in which the greater part of the energy is generated in thermal plants it is usually found that the hydro installations operate to the best advantage on peak load. However, the existing New South Wales and Victorian systems include a proportion of relatively old and less efficient installations which, for reasons of fuel economy, are also best used for the production of peak load power. Therefore, in order to utilise the potential of the Snowy Mountains Scheme most effectively, the order of development was arranged so that the early stations operated, initially, somewhat below the peak of the system load, with a progressive change to predominantly peak load operation as construction proceeded and as the load increased in magnitude.

The Snowy Mountains Scheme is situated about midway between the principal load centres of Sydney and Melbourne and is connected to those cities by 330 kV transmission lines. It is, consequently, in a position to take advantage of the diversity in the power requirements of these two load systems, a most important factor in so far as it affects the economy of operation of the supply systems of the two States. Although most of the output from the scheme will go to the States of New South Wales and Victoria, the Commonwealth Government has the right to draw from the scheme its requirements of power and energy for the Australian Capital Territory and for defence purposes. For convenience, the Commonwealth's requirements are drawn from the New South Wales transmission network by an exchange arrangement between the Commonwealth and the Electricity Commission of New South Wales. Electricity over and above that required by the Commonwealth Government is divided between the States of New South Wales and Victoria in the ratio 2:1.

#### Progress of scheme and future programme

The scheme's first power station, Guthega, of 60,000 kW capacity, came into operation in February 1955. It was followed by Tumut 1, an underground power station with a capacity of 320,000 kW, in 1959, and by the 280,000 kW Tumut 2 underground Power Station in 1962. Eucumbene Dam, which provides the major regulating storage for the scheme, was completed in May 1958. Tumut Pond Dam, completed in September 1958, provides the balancing storage for the power stations of the Upper Tumut Works. The first trans-mountain diversion of water from Lake Eucumbene to the Tumut River at Tumut Pond was made possible when the 14-mile Eucumbene-Tumut Tunnel was completed in June 1959. The 10½-mile Murrumbidgee-Eucumbene Tunnel and the 9-mile Tooma-Tumut Tunnel came into operation early in 1961. Following the completion of the Upper Tumut Works, construction activity was concentrated on the Snowy-Murray Development. The first unit of this development, the Eucumbene-Snowy project which comprises Island Bend Dam and the 15-mile Eucumbene-Snowy Tunnel, commenced diverting Snowy River water to storage in Lake Eucumbene in August 1965. Completion of a 9-mile trans-mountain Snowy-Geehi Tunnel, the 7½-mile Murray 1 Pressure Tunnel, the first of the 1-mile long Pressure Pipelines, and the first two units of the 950,000 kW Murray 1 Power Station in April 1966 allowed the first diversion of the water from the Snowy River to the Murray River in the west. All of the ten turbo-generators were brought into commercial operation with the opening of the Murray 1 Project in July 1967.

Khancoban Dam, designed to regulate power station releases before their discharge into the Murray River, was completed in February 1966. The Murray 2 Project in the base of the open cut excavated in the bank of Khancoban Reservoir downstream of Murray 1 Project was completed in 1969. The four units of Murray 2 Power Station totalling 550,000 kW came into commercial operation in October 1969. Construction is also complete on the Jindabyne Project. The earth and rockfill dam was completed in September 1967, and the pumping station and Jindabyne-Island Bend Tunnel came into service in February 1969.

Blowering Dam on the Tumut River came into service in May 1968, and the 80,000 kW Blowering Power Station began commercial operation in August 1971.

The total installed capacity of the scheme has now reached 2,224,000 kW.

For the Tumut 3 Project the construction of Jounama Dam was completed in 1968 so that the storage of water in Blowering Dam could commence. Talbingo Dam was completed in October 1970 and Tumut 3 Power Station was officially opened in October 1972 with two generators in operation. The succeeding four generators will be brought into service to achieve full operation in 1974.

## STATES AND TERRITORIES

### New South Wales

In Year Book No. 39 an account was given in some detail of the origin and development of electricity generation and distribution in New South Wales. At present the following four Acts govern electricity supply in New South Wales.

The Local Government Act, 1919, which lays down the various rights and responsibilities of local government bodies in the establishment and operation of electricity trading undertakings.

The Gas and Electricity Act, 1935, established the Sydney County Council which is responsible for the distribution of electricity in a large part of the Sydney metropolitan area. The Act also amended the Local Government Act in certain respects.

The Electricity Development Act, 1945, which established the Electricity Authority of New South Wales as the body responsible for the co-ordination of electricity supply throughout the State.

The Electricity Commission Act, 1950, which constituted the Electricity Commission of New South Wales as the major generating authority and not subject to the provisions of the Electricity Development Act.

#### Electricity Commission of New South Wales and electricity supply authorities

The main function of the Commission is the generation and transmission of electricity, which it sells in bulk to distributing authorities (mainly local government bodies) throughout a large part of the State, to the Government railways and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources except in the Snowy Mountains region.

The retail sale of electricity to the public is, in general, carried out by separate electricity supply authorities. At 30 June 1972 there were 41 retail supply authorities throughout the State, comprising 34 electricity county councils (consisting of groups of shire and/or municipal councils), 2 city and 2 municipal councils, 1 shire council, and 2 private franchise holders. In addition to the Electricity Commission, 2 coal companies supply electricity in bulk to retail supplying authorities. Most of the small power stations which had operated in many country centres have closed down as the main transmission network has been extended.

Most electricity distribution areas have been consolidated into county districts consisting of a number of neighbouring local government areas grouped for electricity supply purposes, and administered by a county council comprising representatives elected by the constituent councils. Of the 225 cities, municipalities and shires in New South Wales, 217 are included in one or other of the 34 electricity county districts.

#### The Electricity Authority of New South Wales

The Electricity Development Act, 1945, confers broad powers on the Electricity Authority to co-ordinate and develop the public electricity supply industry. The functions of the Authority include the promotion of the use of electricity and especially its use for industrial and manufacturing purposes and for primary production. Technical advice is given to retail electricity supply authorities on various aspects of their activities such as the framing of retail electricity tariffs, public lighting and standardisation of materials and equipment. The Authority acts in an advisory capacity to the Minister for Mines and Power on electricity distribution matters generally, and may make recommendations concerning the organisation of distribution, the amendment of the law relating to the generation, transmission, distribution and supply of electricity, or on any other matters affecting the electricity distribution industry.

The Authority administers the Rural Electricity Subsidy Scheme under which the rural electrical development of the State has now been virtually completed where the extension of supply is economically feasible. Under the subsidy scheme, local electricity suppliers receive subsidies from the Authority towards the cost of new rural lines. At 30 June 1972 the Authority was committed to the payment of \$36,977,558 in subsidies, of which \$28,389,374 had been paid. Further details of the operation of the scheme are given on page 956, Year Book No. 56.

The Electricity Development Act contains provisions for the making of regulations relating to most aspects of electrical safety. Regulations now in force cover such matters as consumers' installations, licensing of electricians and electrical contractors, approval of electrical articles, safety of linesmen, and overhead line construction and maintenance. In addition, a number of aspects not governed by legislation are covered by codes of practice or recommended procedures.

The Authority also administers the Traffic Route Lighting Subsidy Scheme, which provides for financial assistance to councils towards the cost of installation of improved lighting on traffic routes traversing built-up areas with the objective of reducing the incidence of night road accidents. Since the introduction of the scheme in 1964, subsidy has been approved in respect of some 686 miles of traffic routes throughout the State.

### Generation and transmission

Of the State's electrical power requirements during the year ended 30 June 1972, 84.2 per cent was generated by coal fired power stations in New South Wales, 0.3 per cent by internal combustion plants, 14.3 per cent by hydro-electric stations (including 11.6 per cent obtained direct from the Snowy Mountains Scheme). Interstate imports accounted for 1.2 per cent of the State's electricity requirements.

*Major generating stations.* At 30 June 1972 the major power stations of the State system of the Electricity Commission of New South Wales and their effective capacities were as follows: Liddell (Hunter Valley), 1,000,000 kW; Munmorah (Tuggerah Lakes), 1,400,000 kW; Vales Point (Lake Macquarie), 875,000 kW; Bunnerong (Sydney), 375,000 kW; Wangi (Lake Macquarie), 330,000 kW; Tallawarra (Lake Illawarra), 320,000 kW; Wallerawang (near Lithgow), 240,000 kW; Pyrmont (Sydney), 200,000 kW. The total effective capacity of the Electricity Commission's system as at 30 June 1972 was 5,392,000 kW. The greater part of the Commission's generating plant is concentrated within a hundred mile radius of Sydney.

*Major transmission network.* The retailing of electricity to 97 per cent of the population of New South Wales is in the hands of local distributing authorities, which obtain electricity in bulk from the Commission's major State network. This network of 330 kV, 132 kV, 66 kV and some 33 kV and 22 kV transmission lines, links the Commission's power stations with the load centres throughout the eastern portions of the State, extending geographically up to 400 miles inland.

At 30 June 1972 there were in service 1,453 route miles of 330 kV and 3,369 miles of 132 kV transmission lines (including 116 miles operating for the time being at 66 kV). There were also in service 2,712 miles of transmission line of 66 kV and lower voltages, and 102 miles of underground cable. The installed transformer capacity at the Commission's 148 sub-stations was 19,446,950 kVA.

*Separate systems and total State installed capacity.* Several local government bodies operate their own power stations and generate portion of their requirements which is supplemented by inter-connection with the system of the Electricity Commission. Of these the more important are the Northern Rivers County Council (installed capacity 28,750 kW) and the North-West County Council (15,000 kW). In addition a private company operates small stations supplying the towns of Ivanhoe and Wilcannia. The aggregate effective capacity for the whole of New South Wales systems and isolated plants was 5,425,325 kW at 30 June 1972 and the number of ultimate consumers at this date was 1,657,022.

### Future development

The major new thermal stations already built and those now being developed on the coalfields will become the main base load supply sources for the State. Munmorah, located between Lakes Munmorah and Budgewoi, Vales Point and Wangi, on Lake Macquarie, Wallerawang, near Lithgow, and Tallawarra, on Lake Illawarra, have been completed.

The first 500,000 kW generating unit of the Liddell Power Station in the Hunter Valley was commissioned in 1971, followed by the second in 1972 and the third in 1973. The fourth will follow in 1974, making a total capacity of 2,000,000 kW.

Future projects include the installation of an additional 500,000 kW unit at Wallerawang, scheduled for commissioning in 1975-76 and two 660,000 kW units at Vales Point required for operation in the late 1970's.



The development of the 330 kV main system is continuing. New work in hand includes the construction of major 330 kV transmission lines from Lower Tumut to Canberra, Canberra to Dapto, Liddell to Newcastle, and a new 330 kV substation, Sydney East. Other work is in progress and being planned throughout the State to augment the transmission system.

### Hydro-electricity

The greater part of the hydro-electric potential of New South Wales is concentrated in the Snowy Mountains area (see Snowy Mountains Hydro-electric Scheme, page 956). Apart from this area, major hydro-electric stations are in operation at the Warragamba Dam (50,000 kW), Hume Dam (50,000 kW) and Burrinjuck Dam (20,000 kW). There are, in addition, five smaller hydro-electric installations in operation in various parts of the State. A pumped-storage hydro-electric system to produce 240,000 kW by 1976, is being installed as part of the Shoalhaven Scheme in conjunction with the Metropolitan Water Sewerage and Drainage Board.

## Victoria

In Year Book No. 39 a detailed description is given of the development of electricity generation in the cities of Melbourne, Geelong, Bendigo and Ballarat up to the time of transfer of control of electricity undertakings in those cities to the State Electricity Commission of Victoria. An account is also given of the events culminating in the establishment of the Commission in 1919, and of the early developments in the Commission's undertakings.

### State Electricity Commission of Victoria

Constituted by the *Electricity Commissioners Act* 1918, the State Electricity Commission is a semi-government authority administered since 1921 by a full-time Chairman and three part-time Commissioners. The principal duty of the Commission is to co-ordinate and extend on an economic basis the supply of electricity throughout Victoria. For this purpose it is vested with power to erect, own and operate power stations and other electrical plant and installations, supply electricity retail to individual consumers or in bulk to any corporation or public institution, acquire and operate electricity undertakings, develop, own and operate brown coal open cuts and briquetting works, and develop the State's hydro-electric resources. From its own revenues, which it controls, the Commission must meet all expenditure in the operation of its power and fuel undertakings and provide for statutory payments to State Consolidated Revenue.

The Commission is the controlling authority for all electrical undertakings in Victoria. It is responsible for the registration of electrical contractors, the licensing of electrical mechanics, the control of installation methods and material, and the testing and approval of electrical equipment and appliances.

Since it began operating in 1919 the State Electricity Commission has expanded and co-ordinated the production and supply of electricity on a State-wide basis to the point where its system now generates almost all the electricity produced in Victoria. Victoria's electricity system is based on the utilisation of the extensive brown coal resources of the Latrobe Valley in Gippsland.

Output of brown coal in 1971-72 from the Commission's three open cuts at Yallourn, Morwell and Yallourn North totalled 22,237,000 tons, of which 18,434,000 tons were used in the Commission's power stations. A further 3,493,000 tons of brown coal were used to manufacture 1,303,000 tons of briquettes, of which 258,000 tons were burnt in power stations. The only other fuel used in power generation was 44,000 tons of oil.

Generation in thermal stations is supplemented by energy from the Commission's hydro stations in the mountains north-east of the State, and by hydro entitlements from the Snowy Mountains Scheme (one-third of the output after provision of the Commonwealth's needs) and Hume Power Station (half of the output).

### Electricity Supply

At 30 June 1972 the number of ultimate consumers in Victoria was 1,324,000 all served by the Commission except the extreme eastern settlements of Bendoc and Bonang (supplied from an adjoining area of New South Wales).

The Commission sells electricity retail in all Victorian supply areas except for eleven metropolitan municipalities. These municipalities, retailing electricity under franchises granted before the Commission was established, take bulk supply from the Commission. Bulk supply is also provided to several New South Wales municipalities and irrigation settlements bordering the River Murray.

The Commission's retail consumers numbered over 1,077,000 at 30 June 1972. Of these some 904,000 were domestic, 80,000 industrial and 93,000 commercial. Retail supply is administered through the metropolitan branch and nine extra-metropolitan branches with headquarters at Geelong, Dandenong, Taralgon, Mildura, Ballarat, Benalla, Bendigo, Colac and Horsham. Branch and district supply offices are located in Melbourne and all other major cities and towns in Victoria.

Complete electrification of the State has virtually been achieved. By 30 June 1972 over 1,100,000 homes and 74,000 farms were supplied with electricity. Only a few remote areas remain out of reach of public supply mains.

### **Electricity production, transmission and distribution**

Electricity generated in the State system or purchased by it totalled 14,641 million kWh in 1971-72. The system comprises a series of thermal and hydro-electric power stations. Inclusive of generator capacity both within the State and available to the Victorian system from outside the State, the total installed generator capacity at 30 June 1972 was 3,719 MW. Power stations are interconnected and feed electricity into a common pool for general supply. The major power station in the interconnected system is the Hazelwood brown coal burning power station near Morwell, which alone generates over 50 per cent of Victoria's electricity. Hazelwood, now completed, has eight 200 MW generating sets in service. Other power stations in the interconnected system comprise two further base load brown coal burning power stations, Morwell and Yallourn; steam stations in Melbourne (Newport, Richmond and Spencer Street), and Red Cliffs, which has, in addition, some internal combustion plant; and hydro-electric stations at Kiewa, at Eildon, on the Rubicon and Royston Rivers near Eildon, and at Cairn Curran. All generators for public supply within Victoria are Commission-owned, except Spencer Street Power Station, which remains the property of the Melbourne City Council, although operated as a unit of the interconnected system. The Victorian system is linked with the Snowy Mountains Scheme by a 330 kV transmission line, which also allows the interchange of energy between New South Wales and Victoria. The hydro station at Hume Dam on the River Murray is also linked with the Victorian interconnected system. Output and operating costs of this power station, owned by the Electricity Commission of New South Wales, are shared equally by the Electricity Commissions of Victoria and New South Wales.

The electrical transmission and distribution system in the State supply network at 30 June 1972 comprised over 63,000 miles of power-lines, 30 terminal receiving stations, 164 zone sub-stations, and more than 65,000 distribution sub-stations. Main transmission is by 500 kV, 330 kV, 220 kV, and 66 kV power lines which supply the principal distribution centres and also provide interconnection between the power stations. The 500 kV, 330 kV and 220 kV systems total over 2,000 route miles.

### **Future development**

Yallourn 'W' Power Station, now under construction, is located about half a mile west of the present Yallourn Power Station. Its capacity will be provided by four 350 MW turbo-generators. The first two units are scheduled for service in 1973 and 1974 and the third and fourth units in 1979 and 1980. A natural gas-fired power station of 1,000 MW capacity is under construction adjacent to the existing Newport Power Station. It will have two 500 MW generating units, the first to be in service in 1976, the other in 1978. A 150 MW hydro station associated with an irrigation dam at Dartmouth is planned to be in operation during 1979.

## **Queensland**

In Year Book No. 39 an account is given of the growth of electricity generation in Queensland, with particular reference to south-eastern Queensland, and of the events leading up to the establishment in 1937 of the State Electricity Commission of Queensland. In Year Book No. 53 an account is given of the post-war development and organisation of the electricity supply in Queensland.

Electricity supply in Queensland is governed by the following Acts which are administered by the Commission.

*'The State Electricity Commission Acts, 1937 to 1965.'* These Acts constituted the Commission and define its powers and duties.

*'The Electric Light and Power Acts, 1896 to 1967.'* These Acts relate to the constitution of electric authorities, except the Southern Electric Authority and the Northern Electric Authority, and define their powers and duties and the conditions under which electricity is to be supplied and used.

'*The Regional Electric Authorities Acts, 1945 to 1964.*' These Acts provide for the constitution of Regional Electricity Boards representative of the Commission and the Local Authorities within each region, and define their powers and responsibilities.

'*The Southern Electric Authority of Queensland Acts, 1952 to 1964.*' These Acts established the Southern Electric Authority and define the powers and responsibilities of the Authority.

'*The Northern Electric Authority of Queensland Acts, 1963 to 1964.*' These Acts established the Northern Electric Authority. They also define its powers and responsibilities.

'*The Electrical Workers and Contractors Acts, 1962 to 1971.*' These Acts provide for the certification of electrical workers and for the licensing of electrical contractors.

### State Electricity Commission of Queensland

The Commission commenced to function in January 1938. The Commission is the statutory authority concerned, *inter alia*, with the administration of electricity supply legislation, the general control, organisation and efficient development of the electricity supply industry in Queensland, the forward planning of such development, the control of electricity charges, the administration of regulations and rules relating to safety, the raising of capital, the provision of engineering and consulting services, the promotion of the use of electricity, particularly in manufacturing and rural industries, and the fixing of standards. In addition, it is an authority to which consumers may appeal on matters in dispute between them and their electric authorities. The Commission is also empowered to own and operate generating stations and transmission lines and to sell electricity in bulk.

### Organisation

Regional electrification, with centralised generation and main transmission, is the predominant feature of the organisation of the electricity supply industry in Queensland. The more populous eastern part of the State is served by three major networks.

The southern network embraces the areas of supply of the Southern Electric Authority, the Brisbane City Council, the Wide Bay-Burnett Regional Electricity Board, and the Dalby Town Council. Generation and main transmission in this area are the responsibility of the Southern Electric Authority, which sells energy in bulk to the other three Authorities. The Wide Bay-Burnett Board also operates its own base load power station at Howard. The Southern Electric Authority is also responsible for the distribution of electricity to a large rural area outside metropolitan Brisbane.

The central network is within the area of supply of the Capricornia Regional Electricity Board, which is responsible for the generation, main transmission and distribution of electricity.

The central and southern networks were interconnected by a 275 kV transmission line in early 1973.

The northern network covers the areas of supply of the Cairns, Townsville, and Mackay Regional Electricity Boards. Generation and main transmission are the responsibility of the Northern Electricity Authority, and electricity is purchased in bulk for distribution by the three Regional Electricity Boards. In addition, the Cairns Regional Electricity Board operates small internal combustion generating stations at certain isolated centres in its area, and the Townsville Regional Electricity Board supplies the western area of its region by means of a distribution system based on an internal combustion station at Hughenden.

West of the three main networks the form of organisation which has been adopted is determined by the stage of electrical development which has been reached. Immediately west of the Capricornia region the Central Western Regional Electricity Board operates with generation centralised at internal combustion stations at Longreach and Barcaldine. Other smaller regions of electricity supply are centred on Roma and Mount Isa. In addition, parts of southern Queensland are supplied by the Tenterfield Municipal Council and the North West County Council of New South Wales whilst the Balonne Shire Council purchases electricity in bulk from the Electricity Commission of New South Wales. In the remaining parts of Western Queensland there are a number of isolated electricity undertakings operated by Shire Councils.

The organisation of the industry in Queensland is moving progressively towards a greater integration of generating authorities so that the production of electricity can be centred to an increasing extent on larger and more efficient power stations.

### Electricity generation, transmission and distribution

Electricity generated in the State is based primarily on steam power stations using black coal, 90.3 per cent of the total production during 1971-72 being derived from this fuel. Hydro-electric



stations, located mainly in North Queensland, provided 8.7 per cent, and the balance of the production was provided from internal combustion and gas turbine stations. These gas turbine stations use oil as their energy source. All of the internal combustion diesel stations use oil as fuel but the power station at Roma also uses locally produced natural gas. Electricity generated in Queensland in power stations during 1971-72 totalled 6,944 million kWh. A further 22 million units were purchased in bulk from other producers of electricity for re-distribution to consumers.

At 30 June 1972 the total generating capacity of all Queensland power stations was 2,030,639 kW comprising 1,724,000 kW of steam plant, 135,208 kW of hydro-electric plant, 43,431 kW of internal combustion plant and 128,000 kW gas turbine plant.

The Southern electricity network is served by the following steam power stations: Bulimba 'A' (65,000 kW), Bulimba 'B' (180,000 kW), Tennyson 'A' (120,000 kW), Tennyson 'B' (120,000 kW), Swanbank 'A' (396,000 kW), Swanbank 'B' (360,000 kW) and Howard (37,500 kW) together with gas turbine stations—Swanbank 'C' (30 000 kW) and Middle Ridge (60,000 kW). The central network is served by power stations at Rockhampton (52,500 kW steam and 25,000 kW gas turbine) and at Callide (120,000 kW steam). The northern electricity network is supplied by steam power stations at Collinsville (120,000 kW) and Townsville (37,500 kW) and hydro-electric stations at Kareeya (72,000 kW) and Barron Gorge (60,000 kW).

The electrical transmission and distribution systems within the State comprised over 52,000 circuit miles of electric lines at 30 June 1972. The main transmission voltages are 275 kV, 132 kV, 110 kV, 66 kV and in certain areas 33 kV. The electricity supply industry's extensive rural electrification program continued using the single wire earth return system.

At 30 June 1972 the total number of electricity consumers was 603,450 of whom 229,244 were in the Brisbane metropolitan area.

#### **Future development**

Major development of the State's generating capacity is concentrated on the construction of the following power stations, at Gladstone (1,100,000 kW) and Swanbank 'B' (480,000 kW), and the construction of extensions to Collinsville (60,000 kW). Swanbank 'B' is planned to be fully operational with the commissioning of the fourth and final 120,000 kW set in 1973. The Gladstone power station will comprise four 275,000 kW generating sets, the first two of which are expected to be commissioned in 1975.

In North Queensland, the commissioning of a 60,000 kW set in 1974 will give the Collinsville station a total generating capacity of 180,000 kW.

A decision will be made during 1973 on the size and location of the next major power station to follow Gladstone.

### **South Australia**

A general historical survey concerning the electricity supply industry in South Australia is given in Year Book No. 39, page 1186. The survey traces the development of the industry from its formation in South Australia in 1895 until the establishment of the South Australian Electricity Commission in 1943.

#### **Electricity Trust of South Australia**

In 1946 the assets of the Adelaide Electric Supply Co. Ltd were transferred to a newly formed public authority, the Electricity Trust of South Australia, which became responsible for unification and co-ordination of the major portion of the State's electricity supply and which took over the powers previously vested in the South Australian Electricity Commission. In addition to the powers specified in the Adelaide Electric Supply Company's Acts, 1897-1931, the Trust may supply electricity direct to consumers within a district or municipality with the approval of the local authority, and by agreement with other organisations which generate or supply electricity, arrange to inter-connect the mains of the Trust with those of other organisations, and give or receive supplies of electricity in bulk.

#### **Capacity and production**

Of the total installed capacity in South Australia at 30 June 1972, the Electricity Trust operated plant with a capacity of 1,081,000 kW, and is the most important authority supplying electricity in the State. There were approximately 454,000 ultimate consumers of electricity in the State, of whom

446,000 were supplied directly and approximately 8,000 indirectly (i.e. through bulk supply) by the Trust. Its major steam stations are Osborne 'B' (240,000 kW), Port Augusta Playford 'A' (90,000 kW) and Playford 'B' (240,000 kW), and Torrens Island (480,000 kW).

The Trust operates two smaller power stations, the Mt Gambier Station has an installed capacity of 22,000 kW and Pt Lincoln 9,000 kW—both locations are connected with the Trust's interconnected system with 132 kV lines.

The two main fuels used by the Trust are sub-bituminous coal from Leigh Creek for the Port Augusta, Playford power stations and natural gas from the Gidgealpa-Moomba field for the Torrens Island station.

## Western Australia

For information on the early history of electricity supply in the metropolitan area, see Year Book No. 39, page 1189.

### State Electricity Commission of Western Australia

The State Electricity Commission of Western Australia is empowered to co-ordinate all power undertakings in the State and to encourage and promote the use of electricity and other power. The Commission provides central power supply through an interconnected grid system to the Metropolitan Area, the South-West and Great Southern areas, and an area extending eastward to Koolyanobbing. Beyond the limits of the interconnected system power is supplied to towns by diesel power stations operated by the Commission, local government authorities, private concessionaires, or mining companies. A scheme known as the Northern Areas State Power Scheme is also being developed. For this scheme the Commission purchases power in bulk to supply districts between Northampton and Dongara and to Perenjori and Morawa.

During the year the Commission took over the electricity supply in the following country towns: Geraldton, Coorow, Carnamah, Mingenew, Yerecoin, Wandering, Walpole. All towns taken over were connected to the S.E.C. mains and the local generating plants were shut down except in Geraldton where the change-over may be delayed until June 1973 due to a shortage of funds.

Some details of the Commission's activities for the year are: Number of consumers, 271,432; units generated, 2,666 million kWh; fuel used, 1,154,280 tons of coal, 176,071 tons of fuel oil, 241 million cubic feet of natural gas, and 3,924,290 gallons of diesel fuel.

## Tasmania

A considerable part of the water catchment in Tasmania is at high level, with a substantial natural storage available, and this has made it possible to produce energy at a lower cost than elsewhere in Australia, or in most other countries. Another factor contributing to the low cost is that rainfall is distributed fairly evenly throughout the year with comparatively small yearly variations. Abundant and comparatively cheap supplies of electricity played an important role in attracting industry to Tasmania. However, in recent years Tasmania's advantage in selling electric power has been reduced. A cost differential favouring Tasmania still exists but it is no longer so marked. For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930, see Year Book No. 39, pages 1192-3.

### Hydro-Electric Commission

In 1929 the Government passed the *Hydro-Electric Commission Act 1929*, which established the Hydro-Electric Commission and vested in the Commission, with some minor exceptions, the right to use the waters of the State of Tasmania, and authorised it to develop and reticulate electric power for all purposes. In 1930 this corporate body took over the State hydro-electric undertaking and the business of the Hydro-Electric Department.

**Output and capacity of hydro-electric system**

The following table outlines the development of the Tasmanian generating system.

**TASMANIAN POWER GENERATING SYSTEM**

<i>Station</i>	<i>Year of completion</i>	<i>Head (in feet)</i>	<i>Generator capacity (kW)(a)</i>	<i>Average annual output (million kWh units)</i>
<b>COMPLETED STATIONS</b>				
Waddamana 'B'	1949	1,127	48,000	(b)
Tarraleah . . . . .	1951	981	90,000	593
Butlers Gorge . . . . .	1951	184	12,200	63
Trevallyn . . . . .	1955	415	80,000	541
Tungatinah . . . . .	1956	1,005	125,000	560
Lake Echo . . . . .	1956	568	32,400	76
Wayatinah . . . . .	1957	203	38,250	274
Liapootah . . . . .	1960	361	83,700	455
Catagunya . . . . .	1962	142	48,000	260
Poatina . . . . .	1965	2,720	250,000	1,322
Tods Corner . . . . .	1966	136	1,600	13
Meadowbank . . . . .	1967	95	40,000	209
Cluny . . . . .	1967	51	17,000	105
Repulse . . . . .	1968	88	28,000	160
Rowallan . . . . .	1968	161	10,450	40
Lemonthyme . . . . .	1969	523	51,000	286
Devils Gate . . . . .	1969	226	60,000	300
Wilmot . . . . .	1971	825	30,600	126
Bell Bay . . . . .	1971	(c)	120,000	788
Cethana . . . . .	1971	324	85,000	409
Paloona . . . . .	1972	103	28,000	131
Fisher . . . . .	1973	2,130	43,200	247
<i>Total</i> . . . . .	..	..	1,322,400	6,957
<b>STATIONS UNDER CONSTRUCTION</b>				
Bell Bay, Stage 2 . . . . .	1974	(c)	120,000	739
Gordon, Stage 1 . . . . .	1976	610	240,000	1,445
<i>Total</i> . . . . .	..	..	360,000	2,184
<b>ALL STATIONS</b>				
<b>Grand Total</b> . . . . .	..	..	<b>1,682,400</b>	<b>9,141</b>

(a) Emergency gas turbine generating capacity of 21,000 kW at Bell Bay and 10,000 kW at Macquarie Point (Hobart) not included. (b) Reserve plant only. (c) Thermal station.

The number of ultimate consumers at 31 March 1973 was 155,743.

**New capacity**

The Hydro-Electric Commission's current construction program is the Gordon River Power Development, Stage 1.

The first stage of the Gordon River Power Development involves the construction of a dam and a power station with a proposed instalment of 240,000 kW capacity with provision for an increase to 320,000 kW. An oil fired thermal station with a single 120,000 kW generator was completed at Bell Bay on the River Tamar in 1970. The second stage of the station which will double the capacity is expected to be completed by 1974. A further planned development is the Pieman River Scheme on the west coast of the State. It is expected that the first station in the scheme will be commissioned in 1980.



The Commission is conducting extensive surveys and investigation of other schemes with a view to further construction after the completion of the present program. It is estimated that the potential which can be developed economically should ultimately harness 3,000,000 kW to the system.

## Commonwealth Territories

### Australian Capital Territory

The supply authority is the A.C.T. Electricity Authority, which took over the functions of the Canberra Electric Supply Branch, Department of the Interior, on 1 July 1963. Supply was first made available in Canberra during 1915 and was met from local steam plant. Connection to the New South Wales interconnected system was effected in 1929, and all requirements are now taken from this system. Locally owned plant consists of 4,000 kW of diesel alternators which are retained as a standby for essential supplies. The total number of ultimate consumers at 30 June 1972 was 49,210. During the year 1971-72 the bulk electricity purchased was 634,479,000 kWh and the system maximum demand was 167,400 kW.

### Northern Territory

Electricity is supplied in the main population centres of the Northern Territory by the Department of the Northern Territory under the provisions of the *Supply of Services Ordinance* 1952-1973 and the Electricity Supply Regulations made pursuant thereto.

A steam turbo-generating station is operated together with an extensive distribution system in Darwin, and diesel generating stations and distribution systems at Alice Springs, Katherine, Pine Creek, Elliot and Daly Waters. At Tennant Creek supplies of electricity are purchased in bulk from Peko Mines N.L. and sold to consumers through a distribution system owned by the Department of the Northern Territory.

Capacities of generating stations as at 30 June 1972 were: Darwin 70,500 kW, Alice Springs 11,734 kW, Katherine 5,403 kW, Pine Creek 900 kW, Elliot 200 kW, Daly Waters 150 kW.

The total number of consumers served in the Territory as at 30 June 1972 was 14,093, an increase of 13.8 per cent over that of the previous year.

### Papua New Guinea

For details of electric power generation and distribution *see* Chapter 28, The Territories of Australia.

## Statistical Summary

For a summary of operations of electricity establishments in 1968-69 and 1969-70, *see* Chapter 21, Manufacturing Industry, pages 736-7.

## CHAPTER 28

### THE TERRITORIES OF AUSTRALIA

The internal Territories of Australia are the Northern Territory and the Australian Capital Territory. External Territories under the control of Australia are: Norfolk Island; the Territory of Papua (formerly British New Guinea); the Territory of New Guinea (under Trusteeship Agreement with the United Nations); the Territory of Heard and McDonald Islands; the Australian Antarctic Territory; the Territory of Cocos (Keeling) Islands; and the Territory of Christmas Island. There is also the Territory of Ashmore and Cartier Islands, deemed to form part of the Northern Territory.

Information on all except Ashmore and Cartier Islands is contained in the following pages, and details of the acquisition of all the Territories will be found on pages 5, 22, and 23 of Chapter 1. More detailed statistics and additional descriptive matter are to be found in the Annual Reports of the Administrations of the various Territories and in the *Northern Territory Statistical Summary* (1.6) and the *Australian Capital Territory Statistical Summary* (1.7) issued by this Bureau. Statistics for the Northern Territory and the Australian Capital Territory are also included in chapters dealing with particular subjects. The Statistician, Papua New Guinea, issues a number of publications containing statistics relative to these two Territories, separate and combined.

Responsibility for the general administration of the Territories of Norfolk Island, Papua New Guinea, Cocos (Keeling) Islands and Christmas Island is vested with the Commonwealth Department of External Territories; for the Northern Territory (including Ashmore and Cartier Islands) with the Department of the Northern Territory; the Australian Capital Territory with the Department of the Capital Territory; and for Antarctica and Heard and McDonald Islands with the Department of Supply. Matters excepted are defence and civil aviation, and, in the Northern Territory and the Australian Capital Territory, public health, justice, education (excluding Aborigines), postal and communications and the construction and operation of the basic physical services, which are the responsibility of the Department of Health, the Attorney-General's Department, the Department of Education, the Postmaster-General's Department and the Department of Works, respectively.

### THE NORTHERN TERRITORY

#### General description

##### Area

Upon the extension of New South Wales westwards to the 129th east meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 it was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1 January 1911. The total area is 520,280 square miles.

##### Legislation and administration

On 1 January 1911 the Territory was transferred from South Australia to the Commonwealth. The terms were outlined in Year Book No. 15, page 940.

The *Northern Territory (Administration) Act 1910-1973* provides for an Administrator, appointed by the Governor-General, to administer the Territory on behalf of the Commonwealth.

It provides for a Legislative Council for the Northern Territory to make ordinances for the peace, order and good government of the Territory. This Council consists of six official members and eleven elected members. A President of the Council is elected from among the elected members. Money votes may be proposed in the Council only upon recommendation by message of the Administrator.

Ordinances are presented to the Administrator for assent. He is obliged to reserve ordinances relating to certain matters, including Crown lands and Aborigines, for the Governor-General's pleasure. Others he may assent to, withhold assent from, or return to the Legislative Council with recommended amendments. The Governor-General may within six months, disallow any ordinance assented to by the Administrator and, in respect of an ordinance reserved for his pleasure, he may assent, withhold assent, withhold assent to part of the ordinance and assent to the remainder, or recommend to the Administrator any amendments to the laws of the Territory that he considers desirable arising out of his consideration of the ordinance.

The Act also provides for an Administrator's Council to advise the Administrator on any matter referred to it, either by the Administrator, or in accordance with the provisions of any ordinance of the Northern Territory. The Council consists of the Administrator, and two official and three elected members of the Legislative Council.

The Territory elects one member to the House of Representatives.

The Corporation of the City of Darwin was established in 1957. The Corporation comprises a Mayor and ten aldermen (two for each ward) elected by adult franchise. Alice Springs was constituted a municipality on 25 June 1971 and the first election held on 26 June 1971. The Alice Springs Corporation consists of a Mayor and eight aldermen elected by adult franchise. Elsewhere in the Territory, municipal services are provided by the Administration. Town Management Boards are established in Katherine and Tennant Creek. Each of these boards consists of five members elected by adult franchise and four members appointed by the Administrator. The function of the Boards is to advise the Administrator on local matters.

### Physical geography

The Territory is within the torrid zone, with the exception of a strip about 180 miles wide which lies south of the Tropic of Capricorn.

The low flat coastline seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and laterite form the occasional cliffy headlands. The coastline of more than 1,000 miles is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries. The only practicable deep-water port for general use, however, is Darwin.

Inland the country generally is devoid of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the seventeenth or eighteenth parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply for the interior system. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

### Climate, fauna and flora

There are two main climatic divisions, the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly all the rainfall occurs in the summer months.

The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous), and frogs abound. There are many varieties of fresh-water fish and littoral *Mollusca*. Butterflies and beetles are strongly represented. The termite is a pest which is capable of serious damage to wooden buildings unless special preventive measures are taken. Mosquitoes and sandflies are very troublesome in the "top end" particularly in the wet season. Most types of native fauna are protected and buffaloes exist in large herds on the northern coastal plains.

The vegetation is north Australian in type but a number of forms belong to the Malayan and Oceanic regions. The climate and generally poor soils associated with it give rise to tropical savannah vegetation, with the size and volume of woody material present being closely related to rainfall and the quality of the forests decreasing strikingly as one proceeds inland from the northern coastline. In the north, cypress pine which is termite resistant, ironwood, bloodwood and paperbark timbers are cut and milled for local building purposes. Further inland, particularly on the Barkly Tableland and parts of the Victoria River district, there are better grazing grasses and some shrubs, while the wide belt of sandy plain between the Barkly Tableland and the ranges in the Alice Springs area, carries mainly spinifex grass and low scrub. The plains of the Alice Springs district carry chiefly an acacia scrub known as mulga, spinifex and other sparse grasses. The principal families represented in the interior are *Gramineae*, *Chenopodiaceae*, *Compositae* and *Mimosaceae*.



## Population

*See also* the chapters Population and Vital Statistics.

The population of the Northern Territory at the census of 30 June 1971, was 48,627 males, 37,763 females, 86,390 persons. These figures include an Aboriginal population of 11,686 males, 11,567 females, 23,253 persons. A total of 4,004 Aborigines were enumerated in urban areas of the Territory, the remainder were enumerated in areas classified as rural. While some Aborigines choose to live on reserves, a large area of reserved land (94,196 square miles) has been maintained to provide economic resources from which the Aborigines may benefit either directly or from royalty payments.

## Aboriginal Affairs

### Policy

Policy statements in Aboriginal affairs in recent years at a Commonwealth level and generally at State level have indicated a clear change from what can be called an 'assimilation' approach to an 'integration' approach, with increasing consciousness of the right of Aborigines to determine their own future. The former Prime Minister, Mr McMahon, in his statement of 26 January, 1972 said 'The Government recognises the rights of individual Aborigines to effective choice about the degree to which and the pace at which they come to identify themselves with that (Australian) society.' and 'The role of governments should increasingly be to enable them (Aborigines) to achieve their goals by their own efforts.'

The underlying principle of the Government's present approach in Aboriginal affairs may be briefly described as 'self-determination'. Emphasis today is on Aboriginal participation in the making of policies, and in decisions about the programs that affect them, and about their future.

### Legal status

As Australian citizens Aborigines are entitled to equality before the law. The Commonwealth Department of Aboriginal Affairs and other Commonwealth departments and agencies, for the purpose of administering various programs designed to benefit Aborigines, define an 'Aboriginal' or 'Torres Strait Islander' as a person of Aboriginal or Islander descent who identifies as an Aboriginal or Islander and is accepted as such by the community with which he is associated.

### Special schools for Aborigines

The special schools for Aborigines were combined with the community schools in February 1973.

### Land

An area of over 94,000 square miles has been reserved in the Northern Territory for Aborigines. The Government has undertaken to vest these reserve lands in the Aboriginal people, and has indicated that Aboriginal land ownership will carry with it full rights to the minerals and timber on the reserves. An Aboriginal Land Rights Commission was appointed in January 1973 to recommend ways and means of implementing this policy. Pending the Commission's report, the granting of leases of land and mining and prospecting rights on reserves has been suspended.

At present, royalties from the mineral and timber activities carried on within reserves are paid into the Aboriginal Benefits Trust Fund, established in 1952. Loans or grants are made from the fund to any Aboriginal or group of Aborigines in the Northern Territory on the advice of a special advisory committee which includes a majority of Aboriginal representatives. Moneys in the fund may be used for a wide variety of purposes which would benefit the Aboriginal people. Ten per cent of the royalties paid by the mining companies at Gove and at Groote Eylandt are paid into special funds for the use of Aborigines at Yirrkala and at Groote Eylandt respectively.

It is the policy of the Australian Government to assist Aboriginal communities outside reserves to purchase land. An Aboriginal Land Fund will be established and the Government has undertaken to provide up to \$5 million per year to the Fund for the next ten years. Two pastoral properties have been bought by Aboriginal communities in the Northern Territory, and others are under investigation. On some other pastoral properties where there are Aboriginal communities, relatively small residential areas are being resumed to allow the communities to manage their affairs with a greater degree of independence.

### **Community services and affairs**

Government policy in the administration of Aboriginal affairs is to work as far as possible through existing State and Commonwealth departments and instrumentalities, and the Department of Aboriginal Affairs has primarily a policy planning and co-ordinating role. Responsibility for a variety of community services on Aboriginal reserves and in Aboriginal communities in the Northern Territory is being transferred from the Northern Territory Division of the Department to other appropriate authorities. The Departments of Education and Health recently assumed full responsibility for education and health respectively in Aboriginal communities in the Northern Territory, and the responsibility for a number of other functions such as town services on reserves and social welfare services is under review.

### **Special programs for Aborigines**

To meet the needs of Aboriginal people throughout Australia the Australian Government has developed, on a national basis, a variety of programs in fields such as health, education, housing, employment and vocational training, special works, regional projects and economic enterprises. These are available to Aborigines in the Northern Territory, but the Australian Government, having direct responsibility for the administration of Aboriginal affairs in the Northern Territory, is able to take special initiatives there.

Attention is being given to changing the institutional character of Aboriginal reserve communities. Supervisory, managerial and technical staff will be replaced by community development advisers, consultants, and workers employed by the communities themselves. Programs are designed to encourage and strengthen the capacity of Aborigines to manage their own affairs, to increase their economic independence, and to reduce existing social and other handicaps facing them. The Government is also able to support and encourage Aboriginal initiative by responding directly to individual communities which wish to develop their own social or economic projects: grants may be made to communities to enable them to improve community facilities and amenities, and to help them to establish economic enterprises.

The Government policy is to provide Aboriginal primary school children in Aboriginal communities with education in their own languages as far as is practicable. Bilingual education programs were initiated in five schools in Northern Territory Aboriginal communities in 1973 as a first step in implementing the new policy.

## **Production**

*See also* the chapters dealing with particular subjects.

### **Land tenure**

Nearly 60 per cent of the total area of land in the Northern Territory is held under various forms of lease or licence which are described in Year Book No. 48, pages 111-12. The remainder comprises unoccupied and unreserved areas (21.1 per cent), reserved (18.7 per cent) and freehold (0.1 per cent). The following changes should be noted.

The Commonwealth Government is conducting a comprehensive review of pre-existing Commonwealth policies affecting land tenures and the interests of Aborigines in land holding on Aboriginal Reserves, and has appointed Mr Justice Woodward to conduct an enquiry into Aboriginal Land Rights. Mr Justice Else-Mitchell has been appointed to conduct an enquiry into Urban Land Tenure.

The chapter Rural Industry of this issue contains statistical information concerning areas occupied under various forms of tenure.

### **Pastoral and agricultural industries**

Beef cattle production is the major rural industry in the Northern Territory. The beef industry has been characterised throughout its history by a slow rate of expansion, due largely to the poor quality of native pastures and unsatisfactory market outlets. Recent developments in pasture improvement, the opening in 1963 of export abattoirs at Katherine and Darwin and better disease control have encouraged producers to improve the quality of their cattle. This, coupled with better management techniques, improved pasture establishment and various incentives and research programs introduced by the Government to encourage the development of the pastoral industry, has resulted in a continuing increase in turnoff figures and value of production.

In the past few years considerable capital has been attracted into land development. Two factors have been principally responsible. The first has been the demonstration by the Department of the Northern Territory and C.S.I.R.O. that Townsville stylo (T.S.) can be grown successfully as a pasture legume in the higher rainfall areas of the Territory. The economic feasibility of this practice has been firmly established by station experience and sustained by favourable beef prices. Improved pasture areas have grown considerably and there has been a greater use of phosphatic fertilisers in the last few years. The second development, the commercial production of grain sorghum, has so far occurred on only a few properties. It requires arable land and considerable capital input. Grain sorghum is still at an early stage of testing; nevertheless it promises to provide a more capital intensive primary industry.

Animal production has been augmented in recent years by the buffalo meat industry. Interest in domestication has been developed on the sub-coastal plains properties which will be necessary for further advancement of this industry. Through the development of more intensive cattle production utilising improved pastures, tropical legume seed production received considerable impetus. A seed certification scheme has been introduced by the Department of the Northern Territory to support this industry.

Increasing private investment in rural development is leading to greater pressures upon the Government for extension services and research. The work of C.S.I.R.O. and the Department of the Northern Territory research stations and experimental farms is providing the basis for continuing rural development. As new knowledge is being gathered it will be followed by testing on farm scale. The research institutions in existence in the Northern Territory are as follows.

*Arid Zone Research Institute*—Alice Springs. With the completion of the new research laboratory in 1967 more emphasis is being placed on arid zone research in the 'Centre' and the need to conserve valuable pastoral lands while achieving maximum productivity.

*Beatrice Hill Animal Husbandry Research Station.* It has two main roles, one as a regional station examining suitable pasture and animal production systems in the Coastal Plains/Darwin area and the second involving basic studies into breeding and breeds with wider implications. Its efforts have been largely devoted to the animal breeding investigations with some attention being paid to the development of improved pasture systems, including establishment, maintenance and the reaction to various grazing rates. Breeding trials are being conducted with Santa Gertrudis, Brahman and Africana, cross-breeds and Shorthorns. Banteng cattle are being studied as a source of tropical blood for breeding cattle adaptable to Territory conditions and a small herd of cross-bred cattle has now been developed. Buffalo/Brahman comparison studies are also being undertaken.

*Victoria River Experiment Station.* This is the only Government Experiment Station in the rangelands of the Northern Territory. Work is being undertaken on genetic improvement of the local breed of Shorthorn cattle, evaluation of improved pastures, supplements, breed comparisons and range management studies.

*Upper-Adelaide River Experiment Station.* The station is mainly concerned with regional investigations of pasture and animal production for the Marrakai area including stocking rates on improved and native pastures, comparison studies of improved pastures and testing of new potential pastures, management of pastures on flood plains and feeding supplementation trials.

*Berrimah Experiment Farm.* The work of this farm has been mainly restricted to pasture and fodder crop investigations, plant introduction, sorghum breeding, fruit, vegetable and weed control trials and intensive animal studies.

*Katherine Experiment Farm.* This farm services the southern part of the Daly River Basin and has a larger component of cropping work than other stations. Work being conducted includes utilisation of Townsville stylo, pasture improvement and management, sorghum, peanut, guar, cowpea and bulrush millet trials and various aspects of cattle management.

*Coastal Plains Research Station.* The work on this station includes rice and pasture improvement, particularly in relation to suitable legumes for the sub-coastal plain.

*Douglas-Daly Experiment Station.* This station is concerned with developing animal production systems for the higher rainfall part of the Daly River Basin including evaluation of pastures under grazing, stocking rates, supplementary feeding, use of fertilizers, pasture establishment, and pasture/animal production trials.

*Other research sites.* Research and trials are also being conducted at selected sites on maize, soybeans, sorghum, peanuts, *Stylosanthes* spp. and weed control.



**NORTHERN TERRITORY: AREA AND PRODUCTION OF CROPS**  
1967-68 TO 1971-72

<i>Crop</i>	1967-68	1968-69	1969-70	1970-71	1971-72
AREA(a) (acres)					
Fruit—Bananas . . . . .	(b)	(b)	(b)	(b)	76
Pineapples . . . . .	(b)	(b)	(b)	(b)	23
Other . . . . .	98	90	71	120	122
<i>Total fruit</i> . . . . .	98	90	71	120	221
Peanuts . . . . .	12	(b)	(b)	58	100
Sorghum for grain . . . . .	(c)	(c)	(c)	3,234	13,932
Vegetables for human consumption . . . . .	189	255	277	253	394
Other crops(d) . . . . .	297	1,057	1,425	2,237	3,602
<b>Grand total(a)</b> . . . . .	<b>596</b>	<b>1,402</b>	<b>1,773</b>	<b>5,902</b>	<b>18,249</b>

**PRODUCTION**

Fruit—Bananas . . . . . bushels	(d)	(d)	(d)	(d)	8,991
Pineapples . . . . . "	(d)	(d)	(d)	(d)	633
Peanuts . . . . . cwt	32	(d)	(d)	295	865
Sorghum (grain) . . . . . bushels	(d)	(d)	(d)	56,022	507,290

(a) Excludes rice; details are not available for publication. (b) Not available for publication, included in Other crops. (c) Not available for publication, excluded from totals. (d) Not available for publication.

**NORTHERN TERRITORY: LIVESTOCK, 1968 TO 1972**

('000)

<i>30 June—</i>	<i>Horses</i>	<i>Cattle</i>	<i>Sheep</i>	<i>Pigs</i>
1968 . . . . .	38	1,130	9	2
1969 . . . . .	39	(a)1,190	10	(a)2
1970(a) . . . . .	41	1,179	8	4
1971(a) . . . . .	41	1,145	9	3
1972(a) . . . . .	(b)	1,166	7	5

(a) At 31 March. (b) Not collected.

**Mining**

The mining industry is the major contributor to the income of the Northern Territory. Mineral output was valued at \$50.5 million in 1971-72 and at \$28 million in the first half of 1972-73. The main minerals being produced are bauxite, manganese, iron ore, copper, gold, and bismuth and the main centres of production are Gove, Groote Eylandt, Frances Creek and Tennant Creek. Exploration for new ore bodies continues at a high level.

A bauxite mining and treatment project based on extensive bauxite deposits has been developed at Gove at a cost of about \$310 million. Under an agreement with the Commonwealth, ratified by a special Ordinance in 1968, Nabalco Pty Ltd undertook to develop the deposits. A supplementary agreement signed in 1969 set the minimum Australian equity in the project at 30 per cent. A joint venture now operates the project in which the respective rights are held, 70 per cent by Swiss Aluminium Australia Pty Ltd and 30 per cent by Gove Alumina Limited (a consortium of seven Australian companies). The first stage of an alumina plant to process the bauxite was opened on 1 July 1972. The capacity of the plant will be expanded from 500,000 tons to 1 million tons per annum by July 1973. The agreement also provides that Gove Alumina Limited can export a total of 40 million tons of untreated bauxite over 20 years and exports commenced in June 1971.

Manganese ore is being produced from extensive deposits at Groote Eylandt in the Gulf of Carpentaria. Production capacity has been increased since the commencement of operations in 1966 and should reach about 1.6 million tons per annum of lump ore and by-products by late 1972 or early 1973. Groote Eylandt supplies all Australia's requirements of metallurgical grade manganese ore and large tonnages are exported to Japan, Europe and the U.S.A. Total shipments of ore in 1971-72 amounted to 813,570 tons valued at about \$15.8 million.

Frances Creek is the only iron ore mine in the Territory following the closure of the Mt Bunday mine in December 1971. All iron ore produced is exported through Darwin to Japan. Total iron ore production in 1971-72 was 585,568 tons valued at about \$5.5 million.

Most of the copper, gold and bismuth produced in the Territory is obtained from the underground mines of Peko Wallsend Ltd, at Tennant Creek. Production from these mines in 1971-72 was 6,652 tons of copper, 233,363 fine ounces of gold, 130,421 ounces of silver and 334.5 tons of bismuth, valued at about \$18.4 million. Three mines are currently in production and a major expansion program costing \$39 million is underway. A new mine, Warrego, commenced operation in July 1972 and the Gecko mine is expected to open early in 1974. A flash smelter is due to be commissioned in 1973.

Large deposits of uranium ore have been discovered in the Alligator Rivers region, about 150 miles east of Darwin. The most important discoveries so far are Ranger 1, Nabarlek and Koongarra and the companies are negotiating individually with the Commonwealth for the development of the deposits, with special emphasis on protection of the environment. The Commonwealth is examining the feasibility of a regional centre to serve the mining industry as well as the forestry, pastoral and tourist industries in the region. The Alligator Rivers region is considered to be a uranium province of world importance and there are good prospects for the discovery of further deposits of commercial significance.

Investigations are continuing into possible methods of treating the extensive lead/zinc deposits located in the McArthur River district. Conventional metallurgical processes are not considered suitable for the treatment of these ores. Other mineral deposits of possible economic significance exist in the Rum Jungle, Jinka Plains and Jervois Range areas of the Northern Territory.

The following table shows preliminary results of the Mining Censuses taken in respect of the years ended 30 June 1969, 1970 and 1971.

#### NORTHERN TERRITORY: MINING ESTABLISHMENTS 1968-69 TO 1970-71

NOTE. Direct comparisons with figures for previous years are not possible because of changes in the census units, the scope of the census and the items of data. For details see Chapter 26, Mineral Industry.

		1968-69	1969-70	1970-71
Establishments operating during year	No.	21	27	30
Persons employed(a)	No.	1,281	1,446	1,495
Wages and salaries	\$m	6.6	8.0	8.7
Turnover	\$m	36.3	38.5	41.3
Opening stocks at 30 June	\$m	4.4	4.7	5.3
Closing stocks at 30 June	\$m	5.1	5.2	6.1
Purchases, transfers in and selected expenses	\$m	14.8	13.2	20.0
Value added(b)	\$m	22.2	25.9	22.2
Fixed capital expenditure(c)	\$m	12.9	20.6	26.0

(a) At end of June. Includes working proprietors, less purchases, transfers in and selected expenses.

(b) Turnover plus increase (or less decrease) in the value of stocks, (c) Outlay on fixed tangible assets less disposals.

*Petroleum and natural gas.* Offshore operations again represented the main activity in petroleum exploration during 1971-72. At 30 June 1972, 7 oil permits, covering 57,500 square miles; 2 oil licences, covering 229 square miles; as well as 20 exploration permits, covering 3,535 blocks (approximately 114,364 square miles); were being held.

Drilling of the Petrel structure in the Bonaparte Gulf resulted in a promising discovery of natural gas. Other off-shore exploration to date has not, however, revealed the presence of gas in commercial quantity.

On-shore evaluations of the Mereenie oil and gas field have indicated reserves of 300 million barrels of oil and up to 1 U.S. trillion cubic feet of gas. The recovery of the oil presents some difficulties but the feasibility of establishing a small refinery at Alice Springs is being examined by the exploration companies and the Government.

A substantial natural gas reservoir at Palm Valley about 70 miles west of Alice Springs has been known to exist since the mid-sixties. Exploration work is continuing to determine the full extent of the gas reserves in this area. The Government is now considering to what use the gas will be put.

### Forestry

A program of forest improvement and development to conserve existing forest areas and increase timber resources undertaken by the Forestry Section of the Department of the Northern Territory aims to eventually reduce the Territory's dependence on imported timber. Basic forestry research is carried out by the Forestry and Timber Bureau at a Regional Research Station established at Berrimah. The Territory forestry program includes the regeneration and utilisation of native forests, the establishment of softwood plantations (1,300 acres in 1971-72) and makes provision for the employment and training of Aborigines in all aspects of forestry work. Local production of log timber, mainly cypress pine, amounted to 1,265,000 super feet in 1971-72 but this was insufficient to meet local needs and some 5,008,000 super feet of sawn timber was imported from interstate and overseas through the port of Darwin. Consumption is higher than this, but is unrecorded as there is no statistical control of road freight imports.

### Fisheries

Following preliminary surveys indicating the existence of valuable prawn resources off the Northern Territory coast, prawning operations by a number of companies were approved for waters adjacent to the Northern Territory. All companies were required to establish shore processing plants following an initial survey period. Three of these companies are now operating. Two are joint Australian-Japanese ventures which have been permitted to use foreign vessels and crews for limited periods and which have been required to establish processing plants in Darwin. The third company is operating a shore processing plant at Groote Eylandt. For a limited establishment period this company has been given protection against the establishment of other processing plants in that area although this protective arrangement would not preclude Aborigines from undertaking their own prawn fishing and processing on Aboriginal reserves should they wish to do so. During 1972, Territory-based prawn ventures exported prawns valued at \$5.4 million, the bulk of which went to Japan.

The other main fishery in the Territory is an inland fishery based on barramundi which produced more than 203 metric tons live weight of fish during 1971-72. A small cultured pearl industry has also been established.

#### NORTHERN TERRITORY: FISHING(a) 1967-68 TO 1971-72

		1967-68	1968-69	1969-70	1970-71	1971-72
<b>Prawning—</b>						
Estimated gross weight of prawn catch . . . . .	tonnes	10	1,077	3,938	4,108	2,629
Gross value of prawns . . . . .	\$'000	14	831	3,646	3,083	2,562
<b>Other fisheries(b)—</b>						
Estimated landed weight of fish catch . . . . .	tonnes	252	242	115	237	365
Gross value of fish . . . . .	\$'000	92	96	51	139	191
<b>All fisheries—</b>						
Number of boats engaged . . . . .		53	110	82	127	130
Number of men employed . . . . .		123	573	437	542	532

(a) Excluding pearl shell fisheries and pearling.

(b) Excluding crabs and oysters.

### Secondary industries

The secondary industries that have so far been established in the Territory have been largely the service industries normally associated with a developing area, such as electrical repairs, printing, motor and marine engineering, plumbing, welding, joinery, sheet metal work, and blue metal crushing. Industrial investments by private interests in recent years include plants to manufacture bitumen, clay bricks, concrete bricks, reinforcing steel, concrete products and fencing materials.



The following table shows preliminary results of the Manufacturing Censuses taken in respect of the years 1968-69 and 1969-70.

**NORTHERN TERRITORY: MANUFACTURING ESTABLISHMENTS,  
1968-69 AND 1969-70**

NOTE. Direct comparisons with figures for previous years are not possible because of changes in the census units, the scope of the census and the items of data. For details see Chapter 21, Manufacturing Industry.

	1968-69	1969-70
Establishments operating during year . . . . . No.	69	65
Persons employed(a) . . . . . No.	922	944
Wages and salaries . . . . . \$m	3.6	4.2
Turnover . . . . . \$m	20.4	20.2
Opening stocks at 30 June . . . . . \$m	1.8	2.1
Closing stocks 30 June . . . . . \$m	2.2	3.1
Purchases, transfers in and selected expenses . . . \$m	11.4	12.5
Value added(b) . . . . . \$m	9.5	8.6

(a) Average over whole year. Includes working proprietors. (b) Sales, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

### Tourism

Tourism has become one of the Territory's major industries in recent years. There were about 112,000 visitors to the Northern Territory in 1971-72. The estimated value of the industry in 1971-72 was \$24 million and in 1972-73 it is expected to reach \$26 million.

A firm of consultants has reported on the tourism potential of Central Australia, and in particular the Ayers Rock-Mount Olga National Park. Their findings have been published in the reports *Tourism Plan for Central Australia* and *Ayers Rock-Mount Olga National Park Development Plan*. The reports are being evaluated and further investigations are being undertaken to assist the Government's consideration of tourism development proposals for the Centre.

### National Parks and Reserves

Large areas in the Territory have been set aside as wildlife sanctuaries under the provisions of the Wildlife Conservation and Control Ordinance. They cover about 19,250 square miles and are controlled by the Chief Inspector of Wildlife in the Department of the Northern Territory. A further 92,704 square miles of Aboriginal reserves are also wildlife protected areas.

There are some thirty-nine national parks and reserves totalling about 946 square miles which are administered by the Northern Territory Reserves Board. The Board is responsible for the care, control and management of these reserves, and its functions include preservation and protection of natural and historical features, and the encouragement of public use and enjoyment of land set aside in such reserves.

## Trade, transport and communication

### Trade

No comprehensive record is kept of the trade between the States and the Territory. The following table shows the values of the principal commodities imported into and exported from the Northern Territory from or to overseas countries during the years 1967-68 to 1971-72.

**NORTHERN TERRITORY: PRINCIPAL OVERSEAS  
IMPORTS AND EXPORTS, 1967-68 TO 1971-72**  
(**\$'000**)

<i>Commodity</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
<b>IMPORTS</b>					
Petroleum and shale spirit—					
Aviation kerosene . . . . .	1,099	1,513	1,093	1,119	212
Automotive spirit . . . . .	587	577	706	1,051	1,108
Automotive distillate . . . . .	324	589	1,103	930	1,437
Furnace fuel . . . . .	473	659	567	837	1,847
Other(a) . . . . .	527	743	1,077	1,226	1,912
Timber . . . . .	257	383	548	404	546
Iron and steel manufactures . . . . .	1,195	893	1,172	833	839
Machinery and transport equipment(b) . . . . .	2,376	12,757	23,534	11,464	9,049
Other articles . . . . .	2,569	3,686	10,029	5,806	8,916
<b>Total imports . . . . .</b>	<b>9,407</b>	<b>21,800</b>	<b>39,829</b>	<b>23,670</b>	<b>25,866</b>
<b>EXPORTS(c)</b>					
Meats . . . . .	4,999	4,999	4,896	5,331	5,744
Fresh prawns and shrimps . . . . .	..	605	4,917	5,627	4,853
Hides and skins, raw . . . . .	134	209	280	183	118
Iron ore . . . . .	3,053	6,467	9,124	7,094	6,847
Other ores and concentrates . . . . .	6,208	8,539	9,207	10,939	16,054
Other articles . . . . .	3,461	8,115	21,301	7,285	15,627
<b>Total exports . . . . .</b>	<b>17,855</b>	<b>28,934</b>	<b>49,725</b>	<b>36,459</b>	<b>49,243</b>

(a) Includes industrial and marine diesel fuel, oil for use as refinery stock, etc. (b) Includes value of oil search equipment (floating structures, etc.) which were brought to the Northern Territory for temporary operation and moved overseas after the planned exploration activities were completed. (c) Includes domestic exports and re-exports.

### Shipping

Shipping services to Darwin are provided from the eastern States by the Australian National Line and from the west by the Western Australian State Shipping Service. Increasing numbers of oil tankers and overseas general cargo vessels visit Darwin while iron ore carriers continue to load lump and fine ore for Japan. The prawning and fishing industry accounts for a significant portion of the shipping entries into the port. A high level of activity continues as a result of visits by oil rig service vessels.

John Burke Pty Ltd operates a subsidised shipping service from Brisbane to the Gulf of Carpentaria ports and serves Aboriginal missions and settlements as well as the mining centres of Gove and Groote Eylandt. Gove is also served by Australian Territory Liner Services. Other shipping services to Groote Eylandt and Gove are in connection with the export of the mining production.

Mission and privately owned boats and barges also provide services from Darwin to Aboriginal communities and ports along the coast.

In 1970 the Australian National Line replaced vessels calling at Darwin with a new container/bulk ore vessel, the *Darwin Trader*, which carries general cargo to Darwin and backloads manganese ore from Groote Eylandt to Tasmania.

In 1971 the Western Australian State Shipping Service introduced two unit-load vessels and in the first half of 1973 a further two unit-load vessels; these vessels replace all the conventional cargo and passenger/cargo vessels previously in use. In early 1972, the Commonwealth Government offered the Western Australian Government a capital grant of \$2.5 million to assist in the purchase of the fourth unit-load vessel. The significant improvement in port operations as a result of the introduction of these vessels has been one of several factors which has led to a review of the previously approved proposals for the development of the port of Darwin.

### Air services

At 30 June 1973 there were 127 aerodromes in the Territory, nine of which are maintained by the Commonwealth Department of Civil Aviation. The overseas passenger services using the Darwin international airport are Qantas/British Airways (Sydney to London and to Hong Kong); T.A.A. on behalf of Transportes Aereos de Timor (Darwin to Baucau) and Merpati Nusantara (Darwin to Kupang). Regular internal services to Darwin, with, in some cases, intermediate stops at Territory centres, are operated by Trans-Australia Airlines and Ansett Airlines (from Adelaide, Melbourne, Sydney and Brisbane), and MacRobertson-Miller Airways Ltd (from Perth and Derby), MacRobertson-Miller Airways Ltd and Connair Pty Ltd operate a network of air services throughout the Territory, the latter company's base being at Alice Springs. The Northern Territory Medical Service has aircraft based at Darwin, Gove and Alice Springs, whilst the Royal Flying Doctor Service operates from Alice Springs. Charter services are available at a number of centres including Darwin, Alice Springs, Katherine, Tennant Creek, Gove and Groote Eylandt.

### Railways

The Commonwealth Railways Commissioner operates the Central Australia Railway from Port Augusta in South Australia to Alice Springs over a distance of 757 miles, of which about 200 are in the Northern Territory. The line is standard gauge from Port Augusta to Marree, a distance of 217 miles, and 3 ft 6 in gauge from Marree to Alice Springs. The Commonwealth Government has approved in principle the construction of standard gauge line between Tarcoola and Alice Springs to replace the Marree-Alice Springs section of the Central Australia Railway and survey work has commenced. The Commissioner also operates the North Australia Railway between Darwin and Birdum on a 3 ft 6 in gauge over a distance of 317 miles. The two inland terminals, Alice Springs and Birdum are about 630 miles apart and are connected by road transport along the Stuart Highway. Larrimah, on the highway and 6 miles north of Birdum, is the point of trans-shipment for passengers and goods and is, at present, the effective terminal. A road-rail freight service operates between Adelaide and Darwin via Alice Springs.

### Roads

The Stuart Highway, 954 miles long, connects Alice Springs with Darwin and runs via Katherine and Tennant Creek. The Barkly Highway, 403 miles long, connects Mount Isa (Queensland) with Tennant Creek and joins the Stuart Highway some 16 miles north of Tennant Creek. The Victoria Highway from Katherine to the Western Australia border (290 miles) is sealed. These highways are used for carrying various freights, including cattle, particularly to and from the railheads at Alice Springs, Larrimah and Mount Isa and provide access to the meat works at Wyndham. The routes are used also for overland tourists and travellers from the southern States to Darwin. The Government three-year program of improvement and maintenance of these highways is nearing completion. There are now approximately 12,527 miles of roads in the Territory of which 2,820 miles are sealed.

Work on the reconstruction and development of beef cattle roads is proceeding; expenditure to 30 June 1972 was \$27.9 million.

The Government has approved the sealing of a 90 mile section of the road between Alice Springs and Erldunda at a cost of \$3.4 million. The sealing of 86 miles of new road to serve the Alligator Rivers region east of Darwin, at a cost of \$4.6 million, is expected to be completed by the end of 1974.

### Posts, telegraph, telephones and wireless

Postal communications is maintained by road, rail and air transport services between major Northern Territory towns and the capital cities of Australia. In addition, vessels belonging to the Western Australian State Shipping Service provide a regular service between Fremantle and Darwin. Inland, the northern part of the Territory receives its mail via Darwin or by means of the aerial services, and the southern districts are served via Adelaide.

The overland telegraph line, covering 2,230 miles runs from Adelaide to Darwin and links Darwin in telegraphic communication with other parts of the world. Trunk telephone lines extend from Adelaide and Townsville to Darwin, providing telephone communication with the capital cities of Australia. These lines also carry interstate telegram and telex traffic and serve the towns along the routes.

Darwin is connected by high frequency radio to Gove Peninsula and to Groote Eylandt. In addition high frequency radio telephone exchanges have been established at Alice Springs and Katherine which provide connections to the telephone network for pastoral, mining, tourist and other organisations throughout the Northern Territory and across the borders into Queensland, South Australia and Western Australia. The majority of homesteads on pastoral leases are equipped with radio transceivers operated under licence from the Postmaster-General's Department.



Regional national broadcasting stations are situated at Darwin, Alice Springs, Tennant Creek and Katherine, and there are two commercial stations situated at Darwin and Alice Springs respectively. Two television stations, ABD Channel 6 of the national broadcasting system and NTD Channel 8, a commercial station, operate in Darwin and a national Television station ABAD Channel 7 commenced transmission at Alice Springs in December 1972.

## Education

*See also* the chapter Education, Cultural Activities and Research.

In February 1973 the Australian Government combined the two existing school systems in the Northern Territory (the welfare schools for Aborigines and the community schools) into a single education authority which has become Australia's seventh public school system.

In 1974 this system will cater for about 23,000 students, a third of whom are Aborigines, and will employ approximately 1,400 teachers. Northern Territory enrolments are expected to continue to increase at a rate between 12 per cent and 14 per cent each year. An extensive building program and intensive teacher recruitment will be a continuing part of the new system's plans.

Prior to February 1973 the welfare schools had been the responsibility first of the Department of the Interior and then of the Department of Aboriginal Affairs. Until 1971 the South Australian Education Department had provided teachers, courses and professional and management services for the community schools which the Australian Government had built and equipped. In July 1970 South Australia announced its intention to withdraw this service. The Commonwealth Teaching Service now provides teachers for Northern Territory schools. It is expected that in 1974 the Service will employ all Northern Territory teachers.

At July 1973 a total of 1,028 teachers were employed in the Northern Territory in 127 schools, including 4 high schools, 2 special schools for mentally and physically handicapped children, 2 Schools of the Air serving students in outback areas and 3 residential colleges in Alice Springs, Darwin and Gove catering for Aboriginal students who wish to extend and complete their education in an urban centre. In addition there were 32 pre-schools with an enrolment of 1,735 pupils.

Of the 4 high schools, 3 are in the Darwin area and one at Alice Springs. A wide choice of subjects is offered to matriculation standard. Secondary education is also provided at Katherine, Alyangula, Tennant Creek, Batchelor and Nhulunbuy at Area Schools.

The Schools of the Air at Alice Springs and Katherine have previously supplemented the work of the South Australian Correspondence School. In 1974 these schools will themselves become Correspondence Schools to which their students will send written work for marking. In addition residential 'drop-in-centres' are planned for Katherine and Alice Springs to enable School of the Air students to join their peers at Katherine North and Alice Springs for a week or two at a time.

The first step in the program to implement the Government policy of providing Aboriginal primary school children in Aboriginal communities with education in their own languages was made in early 1973. Bilingual education programs were initiated at five schools in Northern Territory Aboriginal communities. When the Aboriginal children develop literacy skills in their own language, transition will be made to tuition in English, and then for their studies in both languages and cultures to continue side by side.

Special boarding-away-from-home allowances, correspondence supervision and conveyance allowances are paid to school children in the Northern Territory. In addition limited numbers of special Northern Territory secondary and tertiary scholarships supplement normal Commonwealth Scholarship provisions.

### Theoretical training for apprentices

From March 1974, technical training of apprentices in the Northern Territory will be conducted in the form of block training in all but a few trades. Apprentices from all centres in the Territory will attend the Darwin Community College for a continuous period of approximately eight weeks each year in first and second years and four weeks in third year. In trades where the number of apprentices does not justify block training, courses will continue to be conducted by correspondence with the possibility of weekly supervised study as at present.

### Darwin Community College

The Darwin Community College, due to open in March 1974, will provide a wide range of post-secondary courses including pre-vocational, apprentice and post-trade training in all major trades, business education, secretarial and commercial courses, certificate courses for technicians, lectures and tutorials for external students of the University of Queensland and other institutions, teacher education and a wide range of continuing education courses. The College is the first institution of its type in Australia. It will be an independent institution governed by a Council responsible to the Minister for Education and funded by the Australian Government.

## Finance

Details of receipts and expenditure of the Territory for the years 1967-68 to 1971-72 are shown in the table following. In this table the receipts and expenditure of the Northern Territory have been classified into a National Accounts form. The table covers transactions relating to the Northern Territory in the Commonwealth Consolidated Revenue Fund and the following trust funds: Aborigines Benefits, Northern Territory Government Settlements Canteens, Northern Territory Housing Commission, Northern Territory Housing Loans, Northern Territory Transport and Northern Territory expenditure from the Aboriginal Advancement Trust Account. Details of the financial transactions of the following Northern Territory semi-government authorities are also included: the Northern Territory Port Authority and the Northern Territory Housing Commission (from 1969-70). Details of the financial transactions of the Darwin City Council are also incorporated in the table. Revenue derived by the Commonwealth from income taxes, customs duties, etc., levied in the Northern Territory and expenditure by the Commonwealth in the Northern Territory on such items as defence, civil aviation, railways, etc., and payments to residents from the National Welfare Fund are not included.

**NORTHERN TERRITORY: RECEIPTS AND EXPENDITURE, 1967-68 TO 1971-72**  
(S'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
RECEIPTS					
Taxation—					
Stamp duties . . . . .	73	86	94	176	158
Motor registration . . . . .	321	517	586	647	784
Other taxes, fees, fines, etc. . . . .	590	696	840	1,434	1,882
Interest, rent, etc. . . . .	1,329	1,339	1,780	1,809	2,282
Public enterprises income . . . . .	2,245	2,659	3,577	5,882	5,341
Net sale of local authority and public corporation securities . . . . .	—393	90	92	133	184
Other receipts(a) . . . . .	335	881	—1,867	1,993	—617
Net charge to Commonwealth budget . . . . .	53,028	56,944	75,525	87,364	111,400
<b>Total receipts . . . . .</b>	<b>57,528</b>	<b>63,212</b>	<b>80,627</b>	<b>99,438</b>	<b>121,414</b>
EXPENDITURE					
Final consumption expenditure					
Law, order and public safety . . . . .	1,370	1,536	1,797	2,976	3,290
Education . . . . .	3,418	4,639	5,628	7,858	9,576
Health and welfare . . . . .	10,663	12,051	16,022	17,760	18,619
Other . . . . .	10,824	12,800	14,118	16,450	21,124
Gross fixed capital expenditure on new assets and stocks—					
Roads . . . . .	8,980	7,994	8,371	11,796	11,315
Housing . . . . .	3,300	3,417	6,859	7,514	8,348
Other . . . . .	15,662	17,036	22,672	27,010	40,138
Net purchase of existing assets(b) . . . . .	—878	—358	—591	45	—22
Interest paid . . . . .	174	113	141	127	234
Cash benefits . . . . .	369	450	498	592	604
Subsidies . . . . .	311	337	648	460	625
Net advances—					
Housing . . . . .	2,334	2,114	3,086	4,610	4,910
Other . . . . .	300	219	160	139	138
Grants for private capital purposes . . . . .	701	864	1,219	2,101	2,515
<b>Total expenditure . . . . .</b>	<b>57,528</b>	<b>63,212</b>	<b>80,627</b>	<b>99,438</b>	<b>121,414</b>

(a) Includes movements in cash, investments, etc. (b) Minus sign (—) denotes excess of receipts (from sales) over expenditure on, or purchases of, existing assets, including housing.

## THE AUSTRALIAN CAPITAL TERRITORY

### General description

The Commonwealth Constitution provides that the Seat of Government of the Commonwealth shall be in the State of New South Wales but distant not less than 100 miles from Sydney. After a number of alternative sites were considered, an area of 911 square miles lying approximately 200 miles south-west of Sydney was transferred to the Commonwealth as from 1 January 1911. A further 28 square miles at Jervis Bay were transferred as from 4 September 1915 to serve as a port for the Territory.

The primary responsibility for administering the Australian Capital Territory lies with the Department of the Capital Territory, whose functions include housing, public transport, and municipal services. Education, public health, justice, police, and the provision of basic physical services, including water supply, sewerage and roads, are the responsibility of the Departments of Education, Health, Attorney-General's, and Works. The National Capital Development Commission has the responsibility for the planning and development of the Canberra city area.

The Australian Capital Territory Advisory Council was established in 1930. It has eight elected members and a representative from each of the Departments of the Capital Territory, Works, and Health, and the National Capital Development Commission, as well as an observer from the Department of Education. The Council advises the Minister for the Capital Territory on matters affecting the Australian Capital Territory. Ordinances are submitted in draft form to the Council for advice and comment before being implemented.

At the census of 30 June 1971 the population of the Australian Capital Territory was 144,063, made up of 140,864 in the urban Canberra (excluding Queanbeyan) area and 3,199 in rural areas (including Jervis Bay). The estimated population of the Territory at 31 December 1971 was 77,100 males and 73,500 females, 150,600 persons. *See also* the chapters Population and Vital Statistics.

### National Capital Development Commission

The *National Capital Development Commission Act 1957-1960* provides for a Commission to undertake and carry out the planning, development and construction of the City of Canberra as the National Capital of the Commonwealth. The year 1971-72 was the fourteenth year of the Commission's operations. Construction work was carried out by means of agency arrangements with the Commonwealth Department of Works and private consultants. Details of the expenditure by the Commission in each year from 1964-65 to 1971-72 are included in the table on page 987.

Total expenditure in 1971-72 was \$59.5 million comprising: land development and services \$14.9 million; water, sewerage and stormwater services and headworks \$4.7 million; housing, flats and other accommodation \$9.7 million; educational facilities \$5.6 million; roads, bridges and traffic control \$4.3 million; city works and associated facilities \$3.3 million; Commonwealth offices \$12.7 million; national works \$1.0 million; others \$3.3 million.

The following major works were completed during the 1971-72 financial year by the Commission: Latham, Holder, Fisher and Rivett Primary Schools; Weston Creek High School; Barry Drive Extension; Belconnen Way Duplication; reconstruction of Cotter Road; Kingsford-Smith Drive extensions; Mundaring Drive extension; Namatjira Drive-Waramanga; Capitol Hill Ring Road; Weston Creek Reservoir No. 7; Weston Creek Reservoir No. 9; Majura Valley Sewerage; Gungahlin Cemetery-Administration Building and Stage 1 development; Belconnen Town Centre services; Phillip Enclosed Oval Pavilion; Phillip Swimming Centre; Kingston Lake Ecology Laboratory; Civic Offices Stage 2; Juliana House-Phillip; Russell Offices-Building No. 10; Woden Building No. 5-Phillip; Parliament House extensions (Senate Wing).

Works under construction at the beginning of the 1972-73 financial year included the following projects: Belconnen High School, Stage 2; Melrose High School, Stage 2; Watson High School Library and extensions; Campbell High School Library and extensions; Narrabundah High School Library and extensions; Canberra High School Library and extensions; Holt, Duffy, Melba and Weetangera Primary Schools; Hindmarsh Drive Duplication-Phillip/O'Malley; Southern Cross Drive to Coulter Drive; Weston Creek-Molongo River Bridge; Ginninderra Arterial, Stage 1; Tuggeranong Arterial, Stage 1; re-alignment of Yarralumla Creek; Tuggeranong Sewer Tunnel; Belconnen Reservoir No. 6A; 54 inch Trunk Sewer-Ginninderra Creek; Mount Stromlo to Rivett 36 inch Water Main; Narrabundah Cycling Track; Woden Transport Depot; Horticultural Centre-Weston; Woden Town Centre-continued development; Belconnen Town Centre-continued development; Woden Bus Interchange; Cotter Reserve Development; Weston Park Development; Kingston Transport Depot, Stage 3; Parliament House Extensions (House of Representatives Wing); Cameron Offices; Campbell Park Offices; Trade Group Offices.



## Works and services

### Housing

Until the period following the 1939–45 War most houses and flats in the Australian Capital Territory were built and rented by the then Department of the Interior. More recently, an increasing number of houses and flats have been built by private enterprise, and as a result the proportion of houses and flats in the Australian Capital Territory occupied by tenants of the Department of the Capital Territory (formerly the Department of the Interior) has fallen from 79.7 per cent of total occupied houses and flats in 1954 to 58.3 per cent in 1961, 38.8 per cent in 1966 and 28.1 per cent in 1971. Although the bulk of rented accommodation is provided by public authorities, and this situation will continue thus in the foreseeable future, there has been a considerable increase in the proportion of home ownership in the Australian Capital Territory since 1954. The proportion of houses and flats owned or being purchased by instalments has risen from 19.5 per cent in 1954 to 29.0 per cent in 1961, 45.6 per cent in 1966 and 51.8 per cent in 1971. Home building activity in the Woden Valley and Weston Creek, south-west of the former city area and Belconnen, north-west of the former city area, has continued to expand, and at June 1971 there were 11,280 occupied dwellings in the Woden Valley and Weston Creek area, and 5,145 occupied dwellings in the Belconnen area. *See also* the chapter Housing and Building.

### Municipal services

Canberra has been developed as a garden city. More than eleven million trees and many acres of lawns have been planted since 1927. The development of new areas of parkland and the maintenance of existing tree and lawn areas is the responsibility of the City Parks Administration of the Department of the Capital Territory. Municipal services are also provided by the Department of the Capital Territory.

At 30 June 1972, 41,241 meters were connected to the city water supply, drawn through twenty-two service reservoirs from three storages on the Cotter River with a total capacity of nearly 20,000 million gallons. In 1971–72 some 7,173 million gallons of water were consumed in Canberra, and in addition the system supplied 454 million gallons to Qucanbeyan, New South Wales. Treatment works at Weston Creek, Belconnen and Fyshwick dispose of Canberra's sewage. At 30 June 1972, 816 miles of sewers, 9 miles of rising sewerage mains and 813 miles of storm water drains were laid.

### Department of Works

Apart from the work it carries out on behalf of the National Capital Development Commission, the Department of Works acts as design and supervision agent for other Commonwealth departments and instrumentalities. Total expenditure during 1971–72 on all operations amounted to \$19.05 million (\$16.8 million in 1970–71), comprising: building works—housing \$49 885; other building \$10,665,878; engineering works \$2,161,691; repairs and maintenance—buildings \$2,404,779; engineering \$3,597,536 and purchase of plant \$168,707.

## Production

*See also* the chapters dealing with particular subjects.

### Lands

Reference has been made in earlier issues of the Year Book to the general conditions of land tenure in the Territory and to the area of alienated and leased land, and the chapter Rural Industry of this issue contains statistical information on the subject. (*See also* § 1. Canberra: Fifty Years of Development, page 123 of Year Book No. 49.)

Under the *Seat of Government (Administration) Act* 1910–1972, no Crown lands in the Territory may be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act. In general, leases of land in the city area are granted under the *City Area Leases Ordinance* 1936–1973. In special circumstances land may be leased for purposes other than business or residential under the *Leases (Special Purposes) Ordinance* 1925–1970 and for church purposes under the *Church Lands Leases Ordinance* 1924–1966. As considerable areas of Commonwealth owned land in the Territory are not immediately required in connection with the establishment of the City, they have been leased for agricultural or grazing purposes for terms consistent with the anticipated growth of Canberra under the *Leases Ordinance* 1918–1966. Some lands in the Territory, in areas generally remote from the City, remain in private ownership under freehold title. A program of progressive acquisition of this land is being implemented.

The Commonwealth Territory at Jervis Bay, comprising about 28 square miles, was acquired from New South Wales for the possible provision of port facilities in connection with the Australian Capital Territory. A portion of the area is occupied by the Royal Australian Naval College (H.M.A.S. *Creswell*) and a Royal Australian Navy airfield. Several blocks fronting Sussex Inlet have been leased for guest houses and holiday camps, etc., under the *Leases Ordinance* 1918-1966, and an area of land in the Murray's Beach area has been set aside for possible use as an atomic power station under the control of the Australian Atomic Energy Commission. Apart from picnic and camping areas, experimental planting, afforestation and soil conservation activities, the remainder of the area is being maintained in its natural state.

### Forestry

Forestry operations in the Australian Capital Territory began in 1915 with the planting of pines on the denuded slopes of Mount Stromlo to arrest soil erosion and improve the visual quality of the landscape. In 1926 a program for development of commercial forests was approved following a comprehensive review of the Territory's potential for forest development. Major reviews of this program were made in 1932, 1954 and 1967, always however retaining the basic policy of systematic conservation and development. Much of the better native forest has been placed under management and forestry operations including fire protection treatment have been extended to some 110,000 acres of natural forest in the Cotter Catchment and adjacent areas. The more productive stands in these areas were harvested extensively to provide timber for Canberra's post-war expansion and were subsequently treated to promote regeneration and protect the quality of water harvested.

The policy of forest management in the Australian Capital Territory has been formulated to cater not only for commercial timber production but also to provide recreation facilities and an attractive visual environment for the national capital and to protect the water supply. These policies can be broadly summarised as follows.

- (a) Manage and develop hardwood forest areas in the Australian Capital Territory and Jervis Bay for production of timber and arrange sales of all forest produce.
- (b) Initiate and maintain a variety of growth and environmental experiments to produce information for management decisions.
- (c) Develop and implement viable multiple use policies for forest areas with particular emphasis on recreation potential and facilities, quality of water harvest in catchments and conservation of the environment.

The forest authority is charged with the management of some 150,000 acres of land in the Australian Capital Territory. Of this some 110,000 acres carry native forest or woodland. As at the 31 December 1972 the total area of coniferous plantations in the Australian Capital Territory and Jervis Bay was 31,000 acres. Of 796 acres at Jervis Bay the majority consists of *Pinus radiata* (Monterey Pine) and *Pinus elliottii* (Slash Pine). The plantations in the Australian Capital Territory consist mainly of *Pinus radiata* and *Pinus ponderosa* (Yellow Pine). Total area of *Pinus radiata* was 28,800 acres.

In 1971-72 there was no significant commercial production of hardwood timber from the Australian Capital Territory and Jervis Bay. Currently hardwood logging is restricted to incidental production from silvicultural operations. However, the volume of softwood cut increased to 2.21 million cubic feet (1.93 million in 1970-71). The total value of this unprocessed timber unloaded at the mill (milldoor value) was \$664,000. This returned \$310,000 in royalties (value of unprocessed timber at stump).

In 1972, Australia's first plantation-based integrated timber-converting complex commenced production, processing timber cut in Australian Capital Territory plantations. It produces structural plywood, sawn, dressed and kiln dried lumber and wood chips. Consumption of logs by this complex is scheduled to reach 4.2 million cubic feet per annum by 1975.

### Agricultural, pastoral and secondary industries

During 1971-72 the production of the more important items of the agricultural and pastoral industry was: wheat 26,560 bushels; wool 821,000 kg; whole milk 704,000 gallons; meat (carcass weight), fresh 7,370 tons. The numbers of livestock depastured at 31 March 1972 were: cattle 20,252; sheep 191,560; pigs 127.

As in the Northern Territory, the secondary industries established in the Australian Capital Territory are largely the service industries associated with the growth of the Territory.

The following table shows preliminary results of the Manufacturing Censuses taken in respect of the years ended 30 June 1969 and 1970.

**AUSTRALIAN CAPITAL TERRITORY:  
MANUFACTURING ESTABLISHMENTS, 1968-69 AND 1969-70**

NOTE. Direct comparisons with figures for previous years are not possible because of changes in the census units, the scope of the census and the items of data. For details see Chapter 21, Manufacturing Industry.

		1968-69	1969-70
Establishments operating during year . . . . .	No.	112	111
Persons employed(a) . . . . .	No.	2,653	2,960
Wages and salaries . . . . .	\$m	9.5	11.1
Turnover . . . . .	\$m	31.2	37.0
Opening stocks at 30 June . . . . .	\$m	3.3	3.7
Closing stocks at 30 June . . . . .	\$m	3.7	3.4
Purchases, transfers in and selected expenses . . . . .	\$m	16.9	19.4
Value added(b) . . . . .	\$m	14.8	17.2

(a) Average over whole year. Includes working proprietors. (b) Sales, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

### Transport and communication

Canberra is connected with the railway system of New South Wales at Queanbeyan by a line 5 miles long. This line was opened for goods traffic on 25 May 1914 and for passenger traffic on 15 October 1923. Direct or linking services operate between Canberra and Sydney and Canberra and Melbourne. Two airlines provide many services daily each way on the Sydney-Canberra-Melbourne route. Regular motor-coach services link Canberra with towns in New South Wales, Victoria and South Australia. The total length of roads in the Territory at 30 June 1972 was: bitumen and concrete, 714 miles; gravel, 241 miles; other formed roads, 26 miles; total, 981 miles. There are three radio broadcasting stations in the Territory, 2CY and 2CN of the national broadcasting system and 2CA, a commercial station, and two television stations, ABC Channel 3 of the national broadcasting system and CTC Channel 7, a commercial station.

### Social

See also the chapter Education, Cultural Activities and Research.

#### Education

The *Education Ordinance* 1937-1966 provides for the compulsory attendance at school of children between the ages of six and fifteen years. The Commonwealth Department of Education is primarily responsible for the education of children in the Australian Capital Territory. By agreement, however, the New South Wales Department of Education arranges the teaching program in accordance with its own curriculum and provides teaching staff. It is reimbursed for expenses incurred.

From the beginning of 1973 some changes in this arrangement have occurred. The Commonwealth Teaching Service is providing approximately 500 assistant teachers for Australian Capital Territory schools in 1973 and from the beginning of 1974 the Commonwealth will assume complete responsibility for education in the Australian Capital Territory and the involvement of the New South Wales Education Department will be phased out. An education authority will be set up to administer Australian Capital Territory education.

At 1 August 1973, there were 12 government secondary schools in the Australian Capital Territory providing courses proceeding to the Higher School Certificate. Forty-three schools provided courses at infants and primary levels, three of these being in rural districts and one in the Jervis Bay area.

A school for physically handicapped children is located at Turner Infants School. Special units for deaf children are situated at Ainslie and Mawson Primary Schools and at Telopea Park High School. Classes for mildly intellectually handicapped children are provided at Ainslie, Mawson, Turner, Narrabundah, Scullin and Waramanga Primary Schools, and at Narrabundah and Lyneham High Schools. Two special schools and two pre-schools serve the needs of moderately and some severely intellectually handicapped children. Aphasic children are catered for in two special classes at Forest Primary School, and two reading centres operate at Downer and Hughes Primary Schools. Special English classes are available at four primary schools and five high schools. Educational guidance services are provided by the Education Clinic and through counselling staff. A new school for the mildly intellectually handicapped will open at Deakin, and a new school and pre-school for the moderately intellectually handicapped at Holt in 1974.



The 59 pre-schools including 2 in the Jervis Bay area and a mobile unit which visits outlying areas of the Australian Capital Territory provide pre-school facilities for approximately 4,000 children between the ages of 3 and 5 years. New pre-schools will be opened in 1974 at Macgregor, Flynn and Evatt. Second units will be provided at Waramanga, Rivett, Duffy, Weetangera, Page and Weston. Three new primary schools are planned for occupation early in 1974. One new secondary school will open in 1974.

At May 1973, there were 19,767 pupils enrolled in primary grades of government schools and 10,682 pupils in secondary forms of government schools.

At February 1973, there were 25 non-government schools in Canberra including 7 secondary schools which provide courses leading to the Higher School Certificate. At the same date 6,630 pupils were enrolled in the primary grades of non-government schools and 4,726 pupils were enrolled in the secondary forms of non-government schools.

The Canberra Technical College, which follows generally the curriculum set by the New South Wales Department of Technical Education, provides trade, post-trade, certificate, and some hobby courses. In 1972 the Technical College provided instruction in 120 courses in 21 different schools of study. Student enrolments in April 1973 were almost 7,600.

The Canberra School of Music provides a diploma course and individual study in a range of instrument and voice. At July 1973, enrolments totalled 450. A new school to accommodate between 1,000 and 1,200 students will be available during 1975.

For information about the Australian National University, refer to the section on universities, page 647, Chapter 19, Education, Cultural Activities and Research.

The Canberra College of Advanced Education was established following a decision by the Commonwealth Government in October 1966 to accept the recommendations of a committee of inquiry into the need for a college of advanced education in the Australian Capital Territory. The College is organised into schools and in 1973 courses were offered in the School of Administrative Studies, the School of Applied Science, the School of Liberal Studies, the School of Teacher Education and the School of Computing Studies. It is envisaged that additional schools will be established as other specialised fields of study are introduced.

### Health

The Canberra and Woden Valley Hospitals serve the population of Canberra and the surrounding region. At 30 June 1972 the Canberra Hospital had 683 beds, a visiting medical staff of 230, 44 salaried medical staff, and a nursing staff of 837. Canberra's second public hospital, the Woden Valley Hospital, opened on 1 May 1973 with ward accommodation for up to 36 patients and a total of 174 staff employed. The hospital will become fully operational progressively, eventually having 600 beds. For further information about health services in the Australian Capital Territory see the Public Health chapter in Year Book No. 53 (pages 549-50) and Year Book No. 56 (page 431) for administrative changes which took place in 1969.

### Justice

The Australian Capital Territory has a Supreme Court and a Court of Petty Sessions. There is an Australian Capital Territory Police Force which at 30 June 1973 numbered 435 including the Commissioner and Superintendent. Of the total, 130 were engaged in Number 1 Division located at headquarters including 2 at the Canberra Police Citizen's Youth Club. Number 2 Division which is located at Woden Centre Police Station comprised 91 members including 2 at Jervis Bay and is also responsible for both Embassy and Parliament House Security. The Traffic Division comprised 97 members including the specialised Water Police, those involved in accident investigation, the Breath Analysis and the Safety Education Sections. There were 47 in the Criminal Investigation Division including a Women Police Section of 7. There were also 56 in the Planning and Research Division including one member of the Women Police. The Recruitment and Training Division located at Woden Centre Police Station had a staff of 9 and there were three in the Special Branch.

### Finance

In the following table identifiable receipts and outlay relating to the Australian Capital Territory have been classified in a National Accounts form. The table covers transactions of the Commonwealth Government in respect of the Australian Capital Territory in the Commonwealth Consolidated Revenue Fund and the following trust funds: Australian Capital Territory Forestry, Australian Capital Territory Housing, Australian Capital Territory Transport and Australian Capital Territory Suspende. In addition, details of the financial transactions of the following semi-government authorities are also covered: Australian Capital Territory Electricity Authority, Commonwealth

Brickworks, National Capital Development Commission, the Canberra Theatre Trust, and the Canberra College of Advanced Education. Revenue derived by the Commonwealth from income taxes, sales tax, etc., levied in the Australian Capital Territory and expenditure by the Commonwealth in the Australian Capital Territory on such items as defence, civil aviation, railways, etc., and payments to residents from the National Welfare Fund are not included.

## AUSTRALIAN CAPITAL TERRITORY: RECEIPTS AND OUTLAY

1967-68 TO 1971-72

(\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
RECEIPTS					
Taxation—					
Liquor . . . . .	226	259	287	340	390
Motor registration . . . . .	760	890	912	1,038	1,219
Stamp duties(a) . . . . .	298	383	1,969	2,475	2,561
Other taxes, fees, fines, etc. . . . .	762	759	911	1,555	4,555
Interest, rent, etc. . . . .	2,180	2,440	2,918	1,811	483
Public enterprises income . . . . .	7,768	7,853	9,603	10,558	11,835
Net sale of public corporation securities . . . . .	2,207	245	603	584	509
Other receipts(b) . . . . .	96	1,145	1,306	2,364	3,091
Net charge to Commonwealth budget . . . . .	63,151	64,882	70,508	84,238	92,551
<b>Total receipts . . . . .</b>	<b>77,446</b>	<b>78,855</b>	<b>89,016</b>	<b>104,963</b>	<b>117,194</b>
OUTLAY					
Final consumption expenditure—					
Law, order and public safety . . . . .	1,575	1,800	2,134	3,225	4,642
Education . . . . .	6,089	7,663	7,376	13,069	15,704
Health and welfare . . . . .	4,153	4,502	5,266	7,355	8,425
Other . . . . .	8,247	9,487	13,464	13,519	14,902
Gross fixed capital expenditure on new assets and stocks—					
Education . . . . .	5,209	5,539	8,237	8,797	9,669
Cultural and recreational facilities . . . . .	4,487	2,869	3,941	1,906	2,083
Health and welfare . . . . .	244	301	1,159	5,236	8,283
Water supply and sewerage . . . . .	10,416	7,041	7,359	6,486	10,882
Roads and bridges . . . . .	10,631	14,774	14,431	17,634	17,536
Power, fuel and light . . . . .	3,252	2,538	2,099	2,733	2,200
Housing . . . . .	4,156	6,189	2,420	531	—3,980
Other . . . . .	10,652	11,474	12,537	19,700	16,636
Net purchase of existing assets(c) . . . . .	—2,967	—7,219	—7,691	—15,466	—15,493
Interest paid . . . . .	297	406	425	478	563
Cash benefits . . . . .	441	481	345	388	584
Net advances for housing . . . . .	10,398	10,254	14,459	18,435	23,582
Grants towards private capital expenditure . . . . .	164	757	1,055	936	976
<b>Total outlay . . . . .</b>	<b>77,446</b>	<b>78,855</b>	<b>89,016</b>	<b>104,963</b>	<b>117,194</b>

(a) Estimated for years prior to 1969-70. (b) Includes movements in cash, investments, etc. (c) Minus sign (—) denotes excess of receipts (from sales) over expenditures on, or purchases of, existing assets, including housing.

## NORFOLK ISLAND

## General description

Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29°S., longitude 168°E. approximately. Its total area is approximately 13 square miles, the island being about 5 miles long and 3 miles wide. It is 1,042 miles from Sydney and 664 miles from Auckland. The length of the coast line is 20 miles, and its form that of an irregular ellipse. Except for a portion on the south side and the landing place at Cascade on the northern side, almost inaccessible cliffs rise from the water's edge. The climate is equable, the average daily maximum temperature varying between 18° C and 26° C. The average annual rainfall is 54 inches. The resident population is about 1,500.

The island served as a penal station from 1788 to 1813 and from 1825 to 1855. In 1856, 194 descendants of the *Bounty* mutineers were transferred there from Pitcairn Island.

### Administration

In 1856 the island was created a distinct and separate settlement under the jurisdiction of the Governor of New South Wales. In 1897 it was made a dependency under the Governor of that Colony, and finally, by the passage of the *Norfolk Island Act* 1913, became a Territory of the Commonwealth of Australia. It is controlled by the Minister for the Capital Territory through an Administrator. The Norfolk Island Council was established pursuant to the *Norfolk Island Act* 1957-1969 and is constituted in accordance with the provisions of the *Norfolk Island Council Ordinance* 1960-1970. The Council may consider and tender advice to the Administrator on any matter affecting the peace, order and good government of Norfolk Island, and must be consulted on certain legislative and financial matters. The Council comprises the Administrator as *ex officio* chairman and voting member and eight members elected biennially.

### Economic activity

The major economic activity of the island is tourism. Primary production is barely adequate for local needs and foodstuffs are imported from New Zealand and Australia, mainly for the tourist trade.

*Primary industries.* The soil on the island is particularly fertile, the climate equable and the rainfall fairly evenly distributed except for a pronounced dry period in November. This enables a wide range of temperate and semi-tropical products to be cultivated. However, the island's comparative isolation presents trading difficulties, and production of bean seed, formerly the major export, has declined rapidly since 1962-63.

Fish abound off the island. In the past a number of ventures have been formed to exploit this resource, but they have been short-lived, mainly because of the lack of a sheltered harbour. A modern whaling station was started on the island in 1955, and production commenced during the second half of 1956. Owing to a marked scarcity of whales after 1961, however, the station was closed down.

An active forestry program is being carried out to increase the resources of Norfolk Island pine and to introduce suitable types of eucalypts.

*Tourists.* Regular sea and air services to the island are available for those who seek a quiet holiday in surroundings of beauty and historic interest. There are at present, apart from flats and unlicensed guest houses, hotels and licensed guest houses, and further accommodation is being built to meet the steadily increasing number of visitors.

*Employment.* A large proportion of the population derives its income from various aspects of the tourist industry including the operation of hotels and duty-free stores. The Australian Government provides services through staff from the Departments of Civil Aviation and Science (Bureau of Meteorology) and teachers are seconded by the N.S.W. State Education Department. A number of clerical and other positions are available to islanders in the Norfolk Island Administration. Very few people rely for their income entirely on agricultural pursuits.

### Trade, transport and communication

Imports to Norfolk Island since the 1939-45 War have risen from \$65,000 in 1945-46 to \$3.9 million in 1971-72. The major proportion (\$1.8 million) in 1971-72 came from Australia and the Pacific Islands while New Zealand supplied \$0.6 million. Exports in 1971-72 amounted to \$0.4 million. Exports to Australia and the Pacific Islands, the principal market, amounted to \$0.3 million, while exports to New Zealand amounted to \$62,000. No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are produced or manufactured in Norfolk Island and shipped direct to Australia, and not goods which if manufactured or produced in Australia would be subject to excise duty.

A shipping service to the island operates at approximately four week intervals from Sydney via Lord Howe Island and Norfolk Island to Noumea and Vila, thence to Sydney. A link with New Zealand is maintained by a service operating from Auckland at approximately 26-day intervals and calling at Norfolk, Noumea, Brisbane, Lyttleton and Auckland.

A passenger and air freight service between Sydney and Norfolk Island is operated by Qantas Airways Ltd twice a week, and more frequently in peak periods. The service extends to New Zealand weekly under charter to Air New Zealand Ltd.

There are approximately fifty miles of motor road on the island. A substantial section of the population possesses private motor cars. Hire cars, taxis and scooters are available.

The island has an automatic telephone service and a radio telephone link with Sydney. A local broadcasting service is operated by the Administration.



### Education

Education is free and compulsory between the ages of 6 and 15 years. The school, which is conducted by the New South Wales Department of Education, conforms to the Australian standard of public education, ranging from kindergarten to the School Certificate (Fourth Form) examination. The teachers are provided by the New South Wales Education Department, although they receive salaries from the Norfolk Island Administration. The number of scholars enrolled at 30 June 1972 was 301.

Bursaries are available for pupils who wish to attend a mainland school either to continue their studies beyond the School Certificate level or undertake high school courses not available on the Island. Trainee scholarships are available for pupils who have left school and wish to undertake apprenticeship or similar training away from the Island.

### Judiciary

The judicial system of Norfolk Island consists of a Supreme Court and a Court of Petty Sessions. The Supreme Court is the highest judicial authority in the Territory and is a superior court of record with original criminal and civil jurisdiction. The jurisdiction of this Court is exercised by one judge sitting in Court or, to the extent and in the cases provided by or under ordinance, sitting in Chambers. The jurisdiction of the Court of Petty Sessions is exercised by the Chief Magistrate or any three magistrates other than the Chief Magistrate.

### Finance

The revenue of the Territory, together with an annual grant from the Commonwealth Government for administrative expenses, is paid to the credit of the Norfolk Island Trust Fund, and advances for administrative and developmental expenses are drawn from the account. The principal items of revenue and expenditure for the five years 1967-68 to 1971-72 were as follows.

#### NORFOLK ISLAND: REVENUE AND EXPENDITURE, 1967-68 TO 1971-72 (\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
REVENUE					
Commonwealth subsidy . . . . .	66	66	66	66	66
Customs duties . . . . .	110	105	116	146	158
Sale of liquor . . . . .	56	61	68	69	82
Post office . . . . .	122	260	219	236	228
Company registration fees . . . . .	..	22	43	51	89
All other . . . . .	71	65	87	103	126
<b>Total revenue . . . . .</b>	<b>425</b>	<b>579</b>	<b>599</b>	<b>671</b>	<b>749</b>
EXPENDITURE					
Administrative . . . . .	89	104	124	149	164
Social expenditure . . . . .	126	142	154	176	143
Repairs and maintenance . . . . .	67	87	87	136	176
Capital works and services . . . . .	232	87	120	98	93
Postal services . . . . .	59	56	57	122	75
Miscellaneous services . . . . .	27	25	26	79	90
<b>Total expenditure . . . . .</b>	<b>600</b>	<b>501</b>	<b>568</b>	<b>760</b>	<b>741</b>

## PAPUA NEW GUINEA

Greater detail on the subjects dealt with in this section is available in the Papua New Guinea Administration Annual Reports. The sections on pages 990-6 have been prepared by the Director of the Commonwealth Bureau of Meteorology.

### General description

Papua New Guinea comprises the Australian Territory of Papua and the United Nations Trust Territory of New Guinea. The total area of 178,260 square miles lies in the equatorial zone between the equator and 12°S latitude and longitudes 141°E and 160°E.

Papua lies wholly within the tropics. The northernmost point touches 5°S latitude; its southernmost portion, comprising Tagula and Rossel Islands, lies between 11°S and 12°S latitude. It is separated from Australia by Torres Strait. The total area is 86,100 square miles of which 83,325 are on the mainland and 2,775 on the islands of the Trobriand, Woodlark, D'Entrecasteaux, and Louisiade groups.

The Trust Territory of New Guinea extends almost from the equator to latitude 8°S, a distance of almost 500 nautical miles, and from longitude 141°E to 160°E, a distance of 1,000 nautical miles. The total area is 92,160 square miles, of which 69,095 are on the mainland and 23,065 on the islands, including the two northernmost islands of the Solomon Islands, Buka and Bougainville, and the Bismark Archipelago.

### Weather and climate

The climate, particularly the rainfall, over so wide an area as Papua New Guinea, with its numerous islands and varying elevations, presents many variations. Generally speaking, the climate is hot and humid, except in the highlands where days are mild to warm and nights are cool. Mean temperatures vary little throughout the year, and there are no winter and summer seasons comparable to those of higher latitude.

The predominant seasonal feature is the regular alternation between two major air-streams, the south-east trade winds and north-west monsoon. The 'south-east' season prevails approximately from May to October, and the 'north-west' season persists for a shorter period from about December to early April. Two short spells of calm weather occur between these two seasons.

#### Rainfall

There are great spatial variations in the amount of rainfall received over Papua New Guinea. The variations depend mainly upon the direction and speed of the air streams. These streams are moist, requiring only a small amount of lifting for condensation of water vapour to occur. Topography therefore has a dominating influence on the rainfall distribution.

#### Average annual rainfall

The table on page 992 shows the average annual and monthly rainfall for selected stations. It may be seen that the spatial distribution of average annual rainfall varies greatly, being dependent mainly on topography in relation to prevailing winds. The annual averages vary from 1,200 mm at Port Moresby (township) to 5,870 mm at Kikori at the head of the Gulf of Papua. There are few rainfall observing stations above 6,000 feet, so that rainfall above that height must generally be estimated. The map on page 996 shows the rainfall distribution over the region for the year 1972.

#### Seasonal distribution of rainfall

Places in Papua such as Port Moresby, where the south-east trade wind does not blow directly onshore, have a dry season during May-October. Places such as Kikori have heavier rainfall during May-October because of the onshore south-east winds. In New Guinea, where conditions are more equatorial, rainfall occurs throughout the year, but is heaviest in the November-April period at most places.

#### Variability of rainfall

There are marked variations from year to year in annual rainfall totals. At Port Moresby (township), for example, in forty-two years of record the annual rainfall has varied from 1,830 mm to 580 mm; at Daru in fifty-four years of record the annual rainfall has varied from 3,960 mm to 1,170 mm; and at Madang in forty years of record the variation has been from 4,570 mm to 2,340 mm. The table on page 993 shows the annual rainfall at Port Moresby and Lae for the years 1946 to 1972 inclusive.

### Heavy rainfalls

Highest twenty-four hour rainfall registrations have included 549 mm at Pondo Plantation in New Britain and 447 mm at Cape Nelson on the east coast of the main island. Twenty-four hour falls greater than 400 mm have been recorded at a number of other stations in the Papua New Guinea region. The highest twenty-four hour fall recorded in Australia was 907 mm at Crohamhurst, Queensland. All these registrations were for the restricted twenty-four hours period from 9 a.m. to 9 a.m. Higher falls, possibly approaching 700 mm, have probably occurred in Papua New Guinea in unrestricted periods of twenty-four consecutive hours.

### Temperature

Although the region generally has no summer and winter seasons, it has a wide range in temperature because of elevation differences. For each month the mean daily maximum temperature decreases by about 1°C and the mean daily minimum temperature by about 2°C for each 1,000 feet increase in elevation up to 5,000 feet.

A table on page 993 shows temperature and humidity data for five lowland and two highland stations. Mount Hagen, elevation 5,350 feet, is the highest station for which temperature data are available. However, both day and night temperatures continue to decrease with elevation above this level.

### Average seasonal temperature distribution

In the lowland areas there is a difference in temperature pattern between the areas south of the highlands and those to the north. In the south there is a tendency for temperatures to be lower in the May–October period than in the November–April period (e.g. Samarai). In the north there is little difference throughout the year (e.g. Madang). In the highlands, temperatures are appreciably lower than in the lowlands and are slightly lower in the middle of the year than they are at the beginning of the year (e.g. Goroka). The nights are cold in the highlands throughout the year; the mean daily minimum at Mount Hagen for July is 12.6°C.

### Extreme temperatures

The highest air temperature recorded at Lae (in twenty-two years of record) was 38.7°C and the lowest was 19.1°C; at Port Moresby (in thirty-two years of record) the highest was 36.3°C and the lowest was 14.1°C. The mean daily range of temperature is about 8°C at lowland stations and 11°C at highland stations up to 5,000 feet elevation,

### Humidity

Humidity is high generally throughout the year. In the lowlands persistently high humidity in association with high temperatures is responsible for the human discomfort experienced. The average relative humidity for January and July is shown for selected stations in a table on page 993.

In the lowland areas the average monthly 9 a.m. relative humidity (*see* table on page 993) is in the range 75–95 per cent throughout the year. There is little variation from month to month at any station. This is in contrast with northern Australian localities where the south-east winds of the dry season result in low relative humidities. For example, Darwin's average relative humidity at 9 a.m. ranges from 81 per cent in February to 62 per cent in July.

In the highland areas up to 6,000 feet elevation the average monthly 9 a.m. relative humidity is within the range 80–90 per cent throughout the year. The lower temperatures experienced on the highlands result in conditions being generally more comfortable in those areas.

### Evaporation

The only evaporation data available are records for Port Moresby. These show that the mean monthly tank evaporation varies from 140–170 mm per month in the early part of the year to 170–200 mm per month in the latter part of the year. The average annual tank evaporation at Port Moresby over an eleven-year period was 1,869 mm. It is probable that evaporation is less than this value in the higher humidity areas.

### Sunshine and cloud

Mean daily sunshine hours are recorded for each month at Port Moresby, and the figures show a variation from 6.1 hours per day in February and March to 8.4 hours per day in November. The mean daily amount of sunshine at Port Moresby for the year is 6.9 hours, which is significantly less than Darwin (8.5 hours) but comparable with Brisbane (7.5 hours).



At Port Moresby the mean cloud amount varies from 5.1 eighths per day in June to 6.7 eighths in February; at Lae the variation is from 6.0 eighths in May, October and November to 6.7 eighths in January, February and March. The mean daily cloud amounts for the year at Port Moresby and Lae are 5.7 and 6.3 eighths respectively, which are high in comparison with Darwin (3.2).

### Winds

As mentioned previously the south-east trade winds prevail from May to October and the north-west monsoonal winds prevail from December to March over most of the region. However, the broad-scale wind pattern may be completely masked by the effects of local topography and land and sea breezes. The mean 9 a.m. and 3 p.m. wind speeds and prevailing directions are shown in the tables on pages 994-5 for Port Moresby and Lae.

At Port Moresby the mean winds are stronger during the period May-November than during December-April; for example, the 3 p.m. mean wind for August is 21.1 km/h and for March is 12.9 km/h. The winds at 3 p.m. are much stronger than at 9 a.m.; for example, for the year the 3 p.m. mean wind is 16.5 km/h and the 9 a.m. mean wind is 5.9 km/h. The prevailing direction of the wind is south-east during May-November and north-north-west to south-west during December-April.

At Lae the winds are mainly lighter than at Port Moresby. In the period May-October the winds at Lae are lighter than in the period November-April. The winds at 3 p.m. are greater than at 9 a.m. except in February and March. The prevailing direction is north-west at 9 a.m. and south-east at 3 p.m. throughout the year.

### Storms and cyclones

The Papua New Guinea region is subject to thunderstorm activity, squall lines and local storms throughout the year. Severe thunderstorms are frequent in the mountainous areas, but also occur in coastal lowlands. The main tropical cyclone belt lies to the south of the region, but occasionally a tropical cyclone affects the region, causing loss of life and property.

### Climatological tables

The averages and extremes for a number of elements recorded at Port Moresby and Lae are given in the tables on pages 994-5. These tables generally follow the format given for Australian capital cities included in Chapter 2 of this Year Book, the observational data being for available years of record to 1972 inclusive unless otherwise stated. Some elements included in the Australian capital city tables have been omitted from the tables for Port Moresby and Lae because of the inadequacy of observational records.

PAPUA NEW GUINEA: AVERAGE MONTHLY AND ANNUAL RAINFALL FOR  
SELECTED STATIONS(a)  
(Millimetres)

Station (lat. long.)	Years of record	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Bwagaia(b) (10° 42' 152° 50')	42	259	316	276	295	306	257	178	222	237	251	250	227	3074
Daru(b) (9° 04' 143° 12')	70	278	260	325	324	226	108	94	52	43	56	110	205	2081
Dogura(b) (10° 00' 149° 55')	45	233	219	222	155	92	93	78	65	78	82	87	120	1524
Gobaragere(b) (9° 50' 147° 45')	39	195	174	196	211	108	78	46	51	61	78	129	166	1493
Kairuku(b) (8° 31' 146° 32')	47	242	275	278	133	49	46	28	13	40	40	54	133	1281
Kerema(b) (7° 57' 145° 46')	50	231	231	266	285	433	385	347	329	337	299	207	208	3558
Kikori(b) (7° 24' 144° 15')	52	316	336	367	434	748	734	656	560	617	477	326	299	5870
Kokoda(b) (8° 58' 147° 43')	49	339	332	359	327	258	187	181	220	272	322	407	359	3563
Kokopo(c) (4° 20' 152° 15')	39	214	188	220	168	120	120	166	146	110	116	161	226	1955
Kwikila(b) (9° 44' 147° 44')	47	158	133	176	152	82	53	46	43	58	52	66	109	1128
Lae(c) (6° 43' 147° 00')	34	270	235	328	404	420	414	495	511	467	390	338	329	4601
Lindenhafen(c) (6° 16' 150° 28')	36	164	143	174	290	637	845	976	1081	745	432	281	191	5959
Losuia(b) (8° 32' 151° 04')	50	432	420	385	342	334	308	312	270	277	259	239	276	3854
Madang(c) (5° 13' 145° 47')	22	366	290	334	444	369	210	174	132	150	314	388	380	3551
Port Moresby(b)(d) (9° 26' 147° 13')	26	170	221	198	161	52	42	20	32	41	40	69	157	1203

(a) With twenty or more years of record to 1971.

(b) Papua.

(c) New Guinea.

(d) See page 994.

## RAINFALL: PORT MORESBY AND LAE, 1946 TO 1972

Year	Port Moresby (Papua)		Lae (New Guinea)	
	Amount	No. of days	Amount	No. of days
	mm		mm	
1946	1,569	137	(a)4,283	(a)248
1947	1,031	154	4,581	261
1948	1,164	138	4,553	267
1949	1,097	164	4,439	275
1950	1,211	137	4,026	251
1951	1,156	108	4,866	250
1952	1,394	150	4,206	274
1953	919	126	5,023	264
1954	1,181	118	4,412	277
1955	999	128	3,944	261
1956	1,438	141	3,109	233
1957	1,318	129	6,062	282
1958	1,169	107	4,827	250
1959	1,058	126	4,719	245
1960	868	116	4,255	260
1961	1,086	136	4,904	267
1962	1,117	133	4,644	261
1963	1,492	138	4,196	254
1964	1,397	151	4,143	244
1965	1,035	103	4,469	265
1966	1,048	116	5,237	291
1967	1,449	147	5,051	263
1968	1,129	116	4,716	265
1969	1,130	125	5,600	262
1970	1,460	154	5,348	277
1971	1,158	162	4,076	230
1972	1,015	117	4,008	254

(a) Incomplete for July and August.

PAPUA NEW GUINEA: TEMPERATURE AND RELATIVE HUMIDITY FOR  
SELECTED STATIONS

Station	Lat.	Long.	Altitude metres	Years of record	Temperature °C.				Relative humidity			
					Mean Jan.	Mean max. July	Mean min. Jan.	Mean min. July	Mean Jan.	Mean 9 a.m. July	Mean 3 p.m. Jan.	Mean 3 p.m. July
Daru(a)	9° 04'	143° 12'	5	14	31.8	28.4	23.4	22.5	87	78	72	75
Goroka(b)	6° 04'	145° 23'	1,575	15	25.9	24.8	15.2	13.8	84	83	56	51
Kikori(a)	7° 24'	144° 15'	74	5	32.1	26.9	21.9	21.0	91	95	72	86
Madang(b)	5° 13'	145° 47'	4	21	30.2	29.6	23.2	22.8	87	82	75	75
Mount Hagen(b)	5° 52'	144° 14'	1,639	8	24.3	22.7	13.3	12.6	83	88	66	66
Samarai(a)	10° 37'	150° 40'	41	13	31.4	27.0	24.6	22.8	79	82	76	82
Wewak(b)	3° 34'	143° 38'	5	12	30.2	30.2	23.0	22.8	83	82	76	75

(a) Papua. (b) New Guinea.

CLIMATOLOGICAL DATA: PORT MORESBY  
(Jackson's Strip, Lat. 9° 26' S., Long. 147° 13' E., Height above M.S.L. 28 metres)  
BAROMETER, WIND, EVAPORATION AND CLOUD

Month	Mean of 9 a.m. and 3 p.m. atmos- pheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 10 metres)				Mean amount evapo- ration (mm)	Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m.(a)
		Average Km/h		Highest gust speed (km/h)	Prevailing direction		
		9 a.m.	3 p.m.		9 a.m.	3 p.m.	
No. of years of observa- tions . . . . .	23	25	25	25	25	25	15
January . . . . .	1,007.0	5.8	13.4	90	N	W	167
February . . . . .	1,007.1	5.9	13.1	100	NNW	W	143
March . . . . .	1,007.4	5.4	12.9	79	NNW	W	152
April . . . . .	1,008.1	3.2	12.2	64	N	S	139
May . . . . .	1,008.5	4.6	15.7	69	SE	SSE	147
June . . . . .	1,009.7	7.2	18.4	74	SE	SSE	140
July . . . . .	1,009.9	8.8	20.6	74	SE	SE	161
August . . . . .	1,009.9	8.6	21.1	76	SE	SSE	170
September . . . . .	1,010.0	8.3	22.5	74	SE	SSE	182
October . . . . .	1,009.1	5.8	18.9	74	SE	SSE	201
November . . . . .	1,008.1	4.2	15.8	64	SE	SE	201
December . . . . .	1,007.0	4.3	13.8	87	N	SW	185
Year { Total . . . . .	1,008.5	5.9	16.5	..	SE	SSE	1,988
Averages . . . . .	..	..	..	..	..	..	..
Extremes . . . . .	..	..	..	100	..	..	..

(a) Scale 0-8.

TEMPERATURE AND SUNSHINE

Month	Mean temperature (°C)			Extreme shade temperature (°C)		Extreme temperature (°C)	Mean daily hours of sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest	Lowest on grass	
No. of years of observations	32	32	32	32	32	13	13
January . . . . .	31.8	23.1	27.5	36.2 11/64	20.4 27/49	18.5 21/66	6.2
February . . . . .	31.5	23.0	27.3	36.1 12/47	18.8 17/57	16.8 3/68	6.1
March . . . . .	31.4	22.9	27.2	35.4 26/46	18.3 23/61	14.4 31/66	6.2
April . . . . .	30.9	22.7	26.8	34.2 5/46	16.8 11/46	13.7 1/66	7.0
May . . . . .	30.7	22.8	26.7	33.8 2/64	14.5 28/53	15.0 18/66	7.4
June . . . . .	30.0	22.2	26.1	33.9 25/58	14.4 23/54	12.2 29/65	7.0
July . . . . .	29.7	21.7	25.7	33.3 11/64	14.1 8/46	10.4 30/65	6.6
August . . . . .	29.9	21.9	25.9	33.8 12/58	14.8 14/61	10.2 31/67	6.8
September . . . . .	30.4	22.4	26.4	34.8 17/65	14.4 10/61	8.9 1/67	6.8
October . . . . .	31.4	22.8	27.1	35.5 4/65	16.3 11/55	11.2 5/65	7.4
November . . . . .	32.1	22.8	27.4	36.3 11/65	16.7 10/67	12.8 4/63	8.4
December . . . . .	32.2	23.1	27.6	36.3 16/67	19.6 1/63	17.2 16/67	7.3
Year { Averages . . . . .	31.0	22.6	26.8	..	..	..	6.9
Extremes . . . . .	..	..	..	36.3 16/12/67	14.1 8/7/46	8.9 1/9/67	..

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (mb)	Mean relative humid- ity % at 9 a.m.	Rainfall (millimetres)				Fog mean No. days
			Mean No. of days of rain		Greatest monthly	Least monthly	
			Mean mthly			Greatest in one day	
No. of years of observations	23	23	26	24	26	26	24
January . . . . .	28.1	77	170	17	465 1967	26 1950	26 26/67
February . . . . .	28.5	81	221	19	434 1957	60 1947	141 14/49
March . . . . .	28.4	80	198	18	442 1951	28 1950	112 16/51
April . . . . .	28.6	81	161	15	728 1946	9 1966	327 12/46
May . . . . .	28.2	79	52	8	187 1952	2 1958	77 18/60
June . . . . .	26.4	78	42	6	313 1963	0 1957	205 5/63
July . . . . .	25.2	77	32	7	70 1949	0 1958	34 1/52
August . . . . .	25.0	75	32	7	138 1953	1 1959	49 22/53
September . . . . .	25.4	73	41	7	333 1958	0 (a)	150 5/58
October . . . . .	26.2	69	40	7	181 1948	2 1951	54 31/64
November . . . . .	26.4	68	69	8	234 1952	0 1965	98 29/54
December . . . . .	27.6	73	157	13	268 1954	25 1967	123 29/65
Year { Totals . . . . .	..	..	1,203	131	..	..	..
Averages . . . . .	27.0	76	..	11	..	..	48.0
Extremes . . . . .	..	..	..	..	728 4/1946	0 (b)	327 12/4/46

(a) 1948 and 1950. (b) June 1957, September 1948 and 1950, and November 1965.



## CLIMATOLOGICAL DATA: LAE

(Meteorological Office: Lat. 6° 43' S., Long. 147° 00' E., Height above M.S.L. 8 metres)

## BAROMETER, WIND AND CLOUD

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 10 metres)				Mean amount of clouds 9 a.m., 3 p.m., 9 p.m.(a)	
		Average Km/h		Highest gust speed (km/h)	Prevailing direction		
		9 a.m.	3 p.m.		9 a.m.		3 p.m.
No. of years of observations	23	25	25	25	27	27	21
January . . . . .	1,006.8	10.7	11.0	82	NW	SE	6.6
February . . . . .	1,006.8	11.5	11.0	69	NW	SE	6.8
March . . . . .	1,007.2	10.7	10.1	70	NW	SE	6.8
April . . . . .	1,008.4	5.9	9.6	72	NW	SE	6.4
May . . . . .	1,009.5	3.5	8.8	58	NW	SE	5.9
June . . . . .	1,010.5	3.7	8.6	67	NW	SE	6.1
July . . . . .	1,011.0	3.0	8.5	64	NW	SE	6.5
August . . . . .	1,011.0	3.2	8.8	64	NW	SE	6.3
September . . . . .	1,010.9	3.2	10.2	61	NW	SE	6.1
October . . . . .	1,010.1	4.3	10.7	64	NW	SE	6.0
November . . . . .	1,008.5	6.2	11.8	72	NW	SE	6.1
December . . . . .	1,007.4	8.6	11.0	74	NW	SE	6.5
Year { Averages . . . . .	1,009.0	6.2	9.4	82	NW	SE	6.3
Extremes . . . . .	..	..	..	..	..	..	..

(a) Scale 0-8.

## TEMPERATURE

Month	Mean temperature (° C.)			Extreme shade temperature (° C.)	
	Mean max.	Mean min.	Mean	Highest	Lowest
No. of years of observations	22	22	22	22	22
January	31.1	23.7	27.4	38.2 20/59	20.7 7/60
February	31.2	23.3	27.5	37.3 14/57	21.1 24/62
March	30.8	23.7	27.2	38.7 6/56	21.7 16/56
April	30.1	23.3	26.7	33.9 4/56	21.3 22/66
May	29.4	22.9	26.2	33.2 24/52	19.4 30/53
June	28.6	22.4	25.5	33.4 8/58	19.4 20/53
July	27.8	22.0	24.9	32.2 16/64	19.3 31/65
August	27.9	22.0	24.9	32.4 28/64	19.4 27/55
September	28.7	22.2	25.4	32.2 12/13/50	19.1 13/61
October	29.6	22.6	26.1	35.2 31/49	19.1 4/65
November	30.4	23.1	26.7	34.4 30/61	20.9 4/64
December	30.7	23.5	27.1	35.6 24/59	20.3 19/64
Year { Averages	29.7	22.9	26.3	38.7 ..	19.1 ..
Extremes	..	..	..	6/3/56	(b)

(a) 13/1965 and 11/1968.

(b) 13/9/61 and 4/10/65.

## HUMIDITY, RAINFALL AND FOG

Month	Rainfall (millimetres)						Fog mean No. days
	Vapour pressure mean 9 a.m. (mb)	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day	
No. of years of observations	23	34	25	34	34	25	23
January	28.0	270	21	522 1964	107 1958	199 9/59	0.1
February	28.5	235	19	403 1967	53 1957	134 8/53	0.1
March	28.3	328	21	524 1952	140 1968	162 10/52	0.1
April	28.7	404	22	602 1955	237 1968	199 15/53	0.0
May	28.3	420	22	840 1957	67 1956	166 17/61	0.1
June	26.5	414	22	770 1965	115 1964	226 4/51	0.0
July	25.4	495	25	1,018 1953	143 1956	299 16/53	0.1
August	25.0	511	24	823 1957	161 1951	259 14/47	0.0
September	25.6	467	23	882 1926	193 1960	156 10/51	0.0
October	26.5	390	21	695 1970	122 1956	147 20/63	0.1
November	26.7	338	21	577 1948	128 1956	184 2/45	0.0
December	27.7	329	21	605 1957	154 1951	228 16/68	0.0
Year { Totals	..	4,601	262	.. ..	.. ..	.. ..	0.6
Averages	27.1	..	..	.. ..	.. ..	.. ..	..
Extremes	..	..	..	1,018 ..	53 ..	299 ..	..
				7/1953	2/1957	16/7/53	

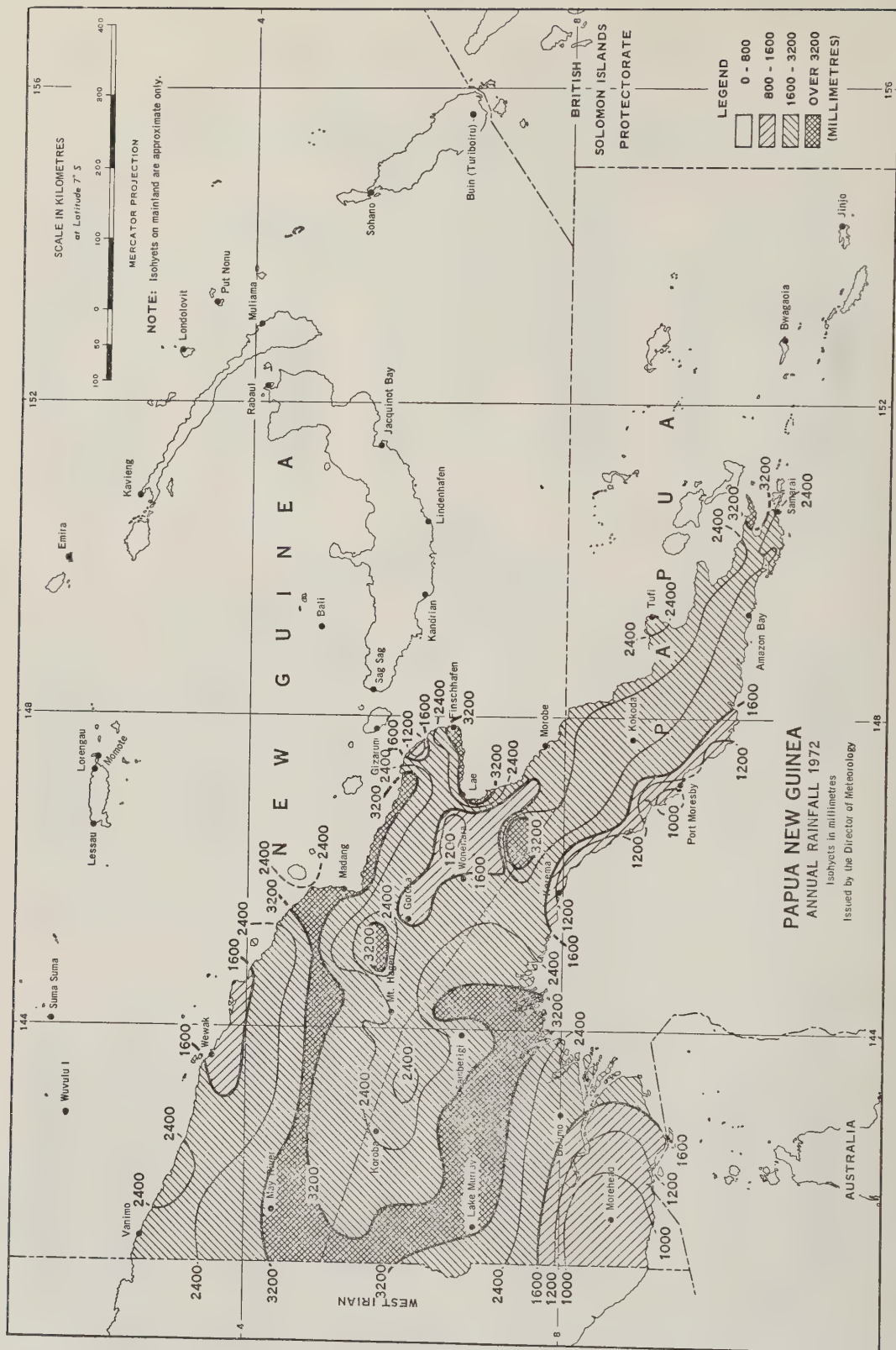


PLATE 55

## Population

The indigenous people of Papua New Guinea may in general be grouped with the Melanesians who occupy the greater part of the Western Pacific. They may be divided into two main types—Melanesian and Papuan—the former representative of the eastern mainland of Papua and the island archipelagos to the east and south-east of Papua, the Bismark Archipelago, the Solomon Islands and the coastal districts of the New Guinea mainland, the latter representative of the western third and interior of Papua and the interior of the mainland of New Guinea. Some negrito traits have been noted in a few of the inland mountain groups. There is a strain of Papuan, and, possibly, of Polynesian blood in the Admiralty Islanders, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians.

Censuses of the non-indigenous population of Papua New Guinea have been taken in conjunction with censuses of the Commonwealth of Australia. For the indigenous population of Papua New Guinea, estimates of size, geographic location, and the broad age distribution of the population were available from the results of the Division of District Administration census (formerly known as the Tax Census). This was conducted over most of the country, but was continuous rather than conducted at a common date for all areas covered. No regular pattern of operations was adopted, although once the census had been taken in an area it was in general repeated fairly frequently. Although these estimates were of great value, the limitations of the information on population characteristics and the lack of simultaneous collection for all areas made them insufficient for many purposes. The 1966 census covered both indigenous and non-indigenous population, and provided, for the first time, an almost complete picture of the population of Papua New Guinea.

Figures for the non-indigenous population as enumerated at censuses held in conjunction with Commonwealth censuses and estimates of the indigenous population based on the Division of District Administration censuses are set out below.

### PAPUA NEW GUINEA: POPULATION AT CENSUSES, 1921 TO 1966

Year	Indigenous					Non-indigenous		
	Enumerated			Persons estimated	Total persons	Males	Females	Persons
	Males	Females	Persons					
PAPUA								
1921.	59,825	52,687	112,512	..	..	1,408	670	2,078
1933.	..	..	170,836	..	..	1,232	941	2,173
1941.	..	..	..	..	..	..	..	..
1947.	..	..	..	..	..	2,057	1,182	3,239
1950.	117,455	104,474	221,929	146,630	368,559	..	..	..
1954.	151,464	134,732	286,196	202,200	488,396	3,867	2,446	6,313
1961.	236,676	209,632	446,308	67,340	513,648	5,490	4,304	9,794
1966.	310,153	281,806	591,959	..	591,959	8,307	6,070	14,377
NEW GUINEA								
1921.	(a)100,445	(a)66,276	(a)166,721	..	..	2,502	671	3,173
1933.	218,218	182,911	401,129	..	..	3,709	1,507	5,216
1941.	324,830	318,988	(b)684,284	300,000	984,284	..	..	..
1947.	..	..	..	..	..	4,369	1,831	6,200
1950.	415,939	354,116	770,055	301,050	1,071,105	..	..	..
1954.	538,113	472,480	1,010,593	184,714	1,195,307	7,201	4,241	11,442
1961.	721,806	647,277	1,369,083	64,300	1,433,383	9,158	6,378	15,536
1966.	810,153	748,205	1,558,358	..	1,558,358	11,746	8,546	20,292

(a) 1920; figures for 1921 not available. (b) Includes 34,087 indentured labourers, 1,127 native constabulary, 4,823 attending approved mission schools, and 429 patients at Anelaura Leprosarium and Taskul Observation Colony (New Ireland), for which particulars of sex are not available.

The total indigenous population of Papua New Guinea at the 1966 census was 2,150,317 persons, and the total non-indigenous, 34,669 persons. For details of selected characteristics of Population Census 1966 see Year Book No. 55, pages 1165–69. Estimated totals for 30 June 1972 are 2,531,882 and 49,245 persons respectively.



### Population Census, 1971

Full details from the Population Census 1971 are not yet available. The census was conducted in July 1971 and covered both indigenous and non-indigenous populations. For census purposes respondents were asked to state whether they considered themselves to be indigenous, European, Chinese or of some other race or mixture of these, without the guidelines provided in 1966, however, it is doubtful that this will affect comparability between the two censuses.

Preliminary figures of the population (indigenous and non-indigenous) of the major towns at the census, July 1971, was as follows: Port Moresby, 66,244; Lae, 34,699; Rabaul, 24,778; Madang, 15,751; Wewak, 12,154; Goroka, 10,756; Mount Hagen, 9,609; Daru, 5,074; Popondetta, 4,591; Lorengau, 4,009 (including Lombrum); Bulolo, 3,548; Kavieng, 3,010; Alotau, 2,516; Mendi, 2,277.

The Census completely enumerated virtually all the non-indigenous population, together with all the indigenous population located in areas outside rural villages. The rural village population was estimated by means of a representative sample of approximately 10 per cent of rural villages. Consequently the figures published for the population of rural villages are estimates of total figures based on a representative sample, while those published for other areas are totals based on complete enumeration. Totals for a district or the country as a whole are the sums of these estimated and actual figures.

### Constitutional development

The *Papua-New Guinea Provisional Administration Act* 1945–1946, which provided for the transfer of control from the military authorities to civil authorities after the 1939–45 War, was repealed by the *Papua and New Guinea Act* 1949. The latter Act approved the placing of the Territory of New Guinea under the International Trusteeship system and provided for an Administrative Union of the Territory of Papua and the Territory of New Guinea with one Administrator, a Legislative Council and an Executive Council, one Supreme Court, and one Public Service.

For an outline of the development of the Legislative and Executive (later Administrator's) Councils between 1949 and 1963, see Year Book No. 51, page 117.

In May 1963 the Commonwealth Government passed an amendment to the Papua and New Guinea Act, making provision for a House of Assembly of sixty-four members to replace the Legislative Council. The house then consisted of ten official members appointed by the Governor-General on the advice of the Administrator, forty-four members elected by the people of the Territory on a common roll in forty-four open electorates, and ten non-indigenous persons elected on a common roll in ten special electorates comprising one or more open electorates. The first elections for the House of Assembly were held in February–March 1964, and the inaugural meeting of the new House was convened on 8 June 1964.

The 1963 Act also increased the membership of the Administrator's Council from seven to eleven, seven of whom must be elected members of the House of Assembly.

In October 1966 the Commonwealth Parliament passed a further amendment to the Papua and New Guinea Act, providing for an increase in the membership of the House of Assembly to ninety-four, sixty-nine members representing open electorates, fifteen from regional electorates and ten official members.

The second general election for the House of Assembly was held from 17 February–16 March 1968, and the Second House was convened on 4 June 1968. A House of Assembly Ministerial Nomination Committee in conjunction with the Administrator chose fifteen elected members who were appointed to seven Ministerial Member and eight Assistant Ministerial Member positions.

The *Papua and New Guinea Act* 1968 provided for the Administrator's Council to become the Administrator's Executive Council, deciding major matters of Territory policy. In June 1968 it had its first meetings. It consisted of the Administrator, the seven Ministerial Members, three official Members, and a twelfth member who was an elected M.H.A. but a non-office holder.

The result of constitutional instruments signed in August, 1970 by the Governor-General and the Minister for External Territories was to transfer full authority in relation to specified matters to designated ministerial office holders. This effectively enhanced the role of the Administrator's Executive Council as the Administrator became bound to accept its advice in respect of these specified matters. Ministerial office holders are fully responsible for the functions of the specified departments, or parts thereof.

The third general election for the House of Assembly was held from 19 February to 11 March 1972, and the Third House was convened on 20 April 1972. Following recommendations made by the Select Committee on Constitutional Development appointed by the Second House, the number of

elected members was increased to 100; 82 members representing open electorates, and 18 representing regional electorates. The number of official members was reduced to four. The Ministry was increased to 17, all with the designation 'Minister', and later in 1972 the limit on the number of Ministers was removed. The Administrator's Executive Council consists of the Administrator and 10 Ministers, one of whom is elected by his fellow Ministers to be Deputy Chairman of the Council. Mr M. Somare M.H.A. was elected to the Deputy Chairman's position and as the leader of the governing majority in the House of Assembly, soon became known as the Chief Minister.

A National Coalition Government was formed following the 1972 General Election, with Mr M. Somare (Pangu Pati) as leader and Dr J. Guise (Independent) as deputy leader. Mr J. Chan (Peoples Progress Party) and Mr T. Kavali (New Guinea National Party) lead the other two major party groups which form the Coalition. The National Coalition also had the support of several independent members and the three Mataungun Association members of the House.

In July/August 1972, discussions between the Minister for External Territories, Papua New Guinea Ministers and the Papua New Guinea Leader of the Opposition on further progress to self-government decided on powers which could be transferred at an early date, and initiated study into the transfer of others. It was agreed that Ministerial meetings would be held to discuss future progress as considered necessary.

Two major decisions by the Papua New Guinea House of Assembly in 1972, set the date for self-government and established a Constitutional Planning Committee to make recommendations for a self-governing constitution which would also serve an independent Papua New Guinea. The Australian Government accepted December 1st 1973 as the timing for self-government, and the Labor Government has stated it will work towards an independent Papua New Guinea by 1975. In April 1973 the Minister for External Territories signed instruments which transferred further powers to Papua New Guinea Ministers and gave formal approval to the title of Chief Minister.

Local government was introduced in 1949 by the Native Village Councils Ordinance which was replaced by the *Local Government Ordinance* 1963. The Administrator may establish by proclamation local government councils with authority in defined areas.

To enable the people to participate more fully at district level in the affairs of government in areas of planning and decision making, Area Authorities, consisting of representatives of Local Government Councils in the area, have been set up in the New Ireland District, the Northern District, the Western District, the Southern Highland District, Marus and the Chimbu Districts. There are plans for two authorities in the Western Highlands District. The primary functions of the Area Authorities are to advise the Administrator on district development, and the Minister for Local Government on the allocation of rural development funds. The relationship between various levels of government is one of the questions being considered by the Constitutional Planning Committee.

*Development planning.* In 1968 the Australian Government and the Papua New Guinea House of Assembly endorsed as a working basis for planning the objectives and targets of a development program covering the five years from 1968-69 to 1972-73. In August 1971 the Development Program was reviewed to take account of major changes, mainly resulting from the development of large scale copper deposits on Bougainville.

The program has the following main objectives.

Maximum increase in production consistent with financial and manpower resources and market capacity.

Maximum participation by Papua New Guineans at all levels.

Maximum progress towards financial self-reliance.

Maximum practicable contribution to meeting social needs and raising the level of living of the people.

A new improvement plan is being prepared to cover the period 1974-75 to 1977-78. Consultants have been engaged under the United Nations Development Program to assist the Government to formulate the strategy for the new program. The aim is to produce a program that reflects technical expertise and experience from both inside and outside Papua New Guinea and at the same time is fully endorsed by the House of Assembly.

Following representation by a delegation of Papuan parliamentarians to the Minister for External Territories, seeking special economic consideration for Papua, consultants were engaged to study the problems of the less-developed areas in both Papua and New Guinea. The report of this study will also be used in the preparation of the improvement plan.



### Judiciary

The courts which exercise jurisdiction within Papua New Guinea are: the Supreme Court of Papua New Guinea, District Courts, Local Courts, Village Courts, Children's Courts and Wardens' Courts.

The Supreme Court is the highest judicial authority and has unlimited criminal and civil jurisdiction. Appeals lie from decisions of a single judge to the Full Court of the Supreme Court and, subject to prescribed conditions, from decisions of the Full Court to the High Court of Australia. District Courts have criminal jurisdiction over all summary offences, i.e. generally, all offences punishable by less than 12 months' imprisonment, and conduct preliminary hearings in respect of indictable offences. They also exercise civil jurisdiction over claims for amounts up to \$2,000. Local Courts have criminal jurisdiction over summary offences and may impose penalties not greater than a fine of \$100 or six months' imprisonment, plus civil jurisdiction over matters involving up to \$200. Village Courts are proposed to be set up with village leaders as magistrates. They will have authority for matters involving up to \$100 and jurisdiction over most areas of law with the probable exception of land. Children's Courts have jurisdiction over all offences by persons under the age of 16 years, except the most serious offences, and in affiliation and other child welfare cases. Wardens' Courts exercise jurisdiction over offences against mining laws and civil cases concerning mining or mining lands.

In addition, there is the Land Titles Commission set up under the *Land Titles Commission Ordinance* 1962-1972 to inquire into and determine rights in land, particularly native land. The Commission has a specific function under the *New Guinea Land Titles Restoration Ordinance* 1951-1968 to inquire into and determine claims to interest in land where the official records were lost or destroyed as a result of the Japanese invasion of New Guinea. The future and function of the Land Titles Commission is being examined as part of a Commission of Enquiry into Land matters.

### Agriculture and animal industry

#### Soils

Although many parts of Papua New Guinea are covered by skeletal soils unsuitable for agriculture, there are extensive areas in all districts where fertile soils occur suitable for growing a variety of crops. Soils on the coastal plains consist mainly of alluvium and podsolised alluvium. The coastal swamp soils, of which there are extensive areas in the delta plains of the Sepik and Fly rivers and intermittently around the coasts and along the lower reaches of other rivers, are in general quite unsuited to any form of agricultural development.

Volcanic soils probably offer the greatest prospects for development. They are found mostly on the central plateau and southern foothills of the main island, but there are also areas in New Britain (particularly in the Gazelle and Willaumez Peninsulas), Bougainville and New Ireland, as well as in numbers of smaller islands. Other rich soils are the alluvials of the river valleys. The largest single area of this type is in the valley occupied by the Ramu and Markham Rivers.

#### Land tenure

The *Land Ordinance* 1962-1969 of Papua New Guinea, which came into operation in 1963, replaced much land legislation previously in force separately in the two Territories. This simplification in legislation was a major step towards applying uniform principles to land tenure throughout the whole of Papua New Guinea. All land in Papua New Guinea other than native land or land subject to any estates, rights, titles or interests in force from time to time is Administration land.

There is considerable variation throughout Papua New Guinea in the nature of customary ownership of land. In most areas some rights remain in the landholding group, and individuals within the group have limited rights or use, either for life or for a shorter period. Thus the normal system by which the rights of ownership in land use are acquired is by birth to a landholding group. Transfer of rights between individuals by sale and purchase appears to have been unusual in the past, but this practice is now an established custom in some localities and appears to be increasing. Inheritance may be based on either patrilineal or matrilineal descent, or both. In parts of Papua New Guinea, however, there is a tendency for the whole inheritance system to change, particularly in communities where it is based on matrilineal descent. Following a close study of the problems in relation to land holdings by indigenes, the Government has laid down the following broad principles of policy.

The ultimate and long-term objective in Papua New Guinea is to introduce a single system of land holding regulated by the central Administration by statute, administered by the Department of Lands, Surveys and Mines of the central Administration and providing for secure individual registered titles after the pattern of the Australian system.



Only the Administration working through the Department of Lands, Surveys and Mines and through the Registrar of Titles may issue and register land titles.

Land subject to native custom remains subject only to native custom until it is taken out of custom either by acquisition by the Administration or by a process, provided for by the *Land (Tenure Conversion) Ordinance* 1963–1967, of conversion of title to an individual registered title. Upon either acquisition or conversion of title, compensation is provided in respect of extinction of rights under native custom.

Land held under native custom may not be acquired outside of native custom by other than the Administration. Land may not be acquired by the Administration except for prescribed public purposes unless the native owners are willing to sell and the Administration is convinced, through its Division of District Administration, Department of the Administrator, that the land is not required by them, and conversion of title from native custom to individual registered title may take place only if all those interested in the land under native custom consent to conversion and the method of conversion.

The services of Commissioners under the *Land Titles Commission Ordinance* 1962–1972 are used, as a first priority, on investigations into claims by the Administration that land is ownerless and may therefore be declared administration land, on investigation into the ownership under native custom of land proposed to be acquired by the Administration, on settlement of disputes about the ownership of land held under native custom, and on investigations into the rights held under native custom in land proposed to be converted to individual registered title. The Commissioners, as opportunity offers, continue investigations into the holding of land under native custom; the results of such investigations are recorded for use in connection with future acquisitions or conversions of title.

The legislation and administrative steps necessary to put the remainder of this policy into effect are well advanced.

At 30 June 1972, the distribution of alienated land in Papua New Guinea according to tenure was as follows.

Held by private non-indigenous inhabitants—freehold land, 535,071 acres; leasehold land, 1,005,702 acres; land tenure conversion (freehold), 9,255 acres;

Native reserves, 94,033 acres;

Other Administration land including land reserved for public purposes, 3,797,240 acres.

## Primary industries

### General

The products of Papua New Guinea are obtained principally from its agricultural, forestry, mining, and fishing industries. Indigenous subsistence agriculture, fishing and hunting produce most of the food requirements of the indigenous population. The main indigenous agricultural products are taro, yams, sweet potatoes, bananas, and pawpaws. Peanuts are becoming of increasing importance in the indigenous diet. Non-indigenous enterprise produces most of the commodities exported. Indigenous in recent years have taken up the production of introduced crops such as peanuts, rice, cucurbits, and maize for their own consumption and produce copra, coffee, cocoa, tea, passion-fruit, pyrethrum and palm oil for export.

The principal agricultural products for the export trade are copra and coconut oil, cocoa, coffee and rubber, but exports of timber and timber products are substantial and the export of tea and palm oil is increasing.

### Non-indigenous crop production

In 1970–71 there were 1,255 holdings in use by non-indigenous persons. The total area of these holdings was 1,018,345 acres. The following tables summarise the information available for principal activities.

**PAPUA NEW GUINEA: NUMBER OF HOLDINGS—NON-INDIGENOUS  
AREA, PRODUCTION AND NEW PLANTINGS, 1967 TO 1971**

(Source: *Rural Industries Bulletin*, 1970-71, Papua New Guinea Bureau of Statistics)

Year ended 30 June—	Holdings	Area under crop(a)		Production	New plantings	
					Area	Trees(b)
		acres	'000	tons	acres	'000
Coconuts—						
1967(c)	683	269,127	12,704	81,159	5,208	460
1968	681	270,176	12,809	86,736	4,902	586
1969	685	271,623	12,972	89,115	4,062	382
1970	678	271,836	12,854	84,482	3,755	304
1971	677	269,612	13,007	80,791	2,841	219
Cacao—						
1967(c)	447	126,147	21,830	15,059	4,981	1,366
1968	447	129,706	21,400	18,092	5,446	1,749
1969	443	133,235	22,180	18,134	5,095	1,690
1970	441	132,003	21,714	16,748	3,830	1,330
1971	437	135,099	22,418	17,614	4,942	2,113
Coffee—						
1967(c)	248	14,365	9,912	4,492	1,090	1,212
1968	249	14,817	10,004	4,705	810	937
1969	237	14,685	9,798	6,196	664	828
1970	229	15,037	10,466	6,258	801	983
1971	227	15,514	11,053	7,511	1,061	1,296
Rubber—						
1967(c)	86	37,043	4,177	5,437	1,260	305
1968	89	35,878	4,126	5,711	484	167
1969	83	33,964	3,901	5,850	471	134
1970	79	33,958	3,810	5,191	561	122
1971	75	32,722	3,856	5,746	122	65

(a) Includes mature and immature areas.

(b) Includes replacements.

(c) 31 March.

**PAPUA NEW GUINEA: AREA UNDER PRINCIPAL CROPS AND CROP PRODUCTION  
YEARS ENDED 30 JUNE 1969 TO 1971—NON-INDIGENOUS**

(Source: *Rural Industries Bulletin*, 1968-69, 1969-70, 1970-71, Papua New Guinea Bureau of Statistics)

Crop	Recorded area in acres			Recorded production				Average yield per mature acre		
	1969	1970	1971	Unit	1969	1970	1971	1969	1970	1971
Permanent crops—										
Copra—										
Plantation.	271,623	271,836	269,612	ton	89,115	84,482	80,791	0.38	0.36	0.35
Trade(a)	..	..	..	"	5,119	4,365	2,814	..	..	..
Coconuts, for use as such	..	..	..	"	454	1,441	5,176	..	..	..
Cacao—										
Plantation.	133,235	132,003	135,099	"	18,134	16,748	17,614	0.17	0.16	0.17
Trade(a)	..	..	..	"	1,153	1,193	900	..	..	..
Coffee—										
Plantation.	14,685	15,037	15,514	"	6,196	6,258	7,511	0.53	0.52	0.62
Trade(a)	..	..	..	"	2,087	1,620	942	..	..	..
Oil palms	..	2,710	4,912	"	..	(b)	(b)	..	(b)	(b)
Rubber	33,964	33,958	32,722	ton	5,850	5,191	5,746	0.23	0.19	0.21
Tea	5,270	6,660	7,373	lb (dry)	761,066	1,994,503	2,245,580	449.50	606.00	704.16
Grain crops—										
Maize	176	383	302	bushel	2,737	5,536	4,803	15.55	14.45	15.90
Rice	459	405	216	ton (paddy)	277	237	77	0.60	0.59	0.36
Sorghum	1,625	1,829	2,221	bushel	15,308	50,624	74,039	9.42	27.68	33.34
Crops for green fodder—										
Maize	318	109	38	..	..	..	..	..	..	..
Sorghum	380	676	552	..	..	..	..	..	..	..
Other	1,133	1,134	1,041	..	..	..	..	..	..	..
Industrial crops—										
Peanuts	1,609	2,029	783	cwt (kernel)	6,222	7,487	3,720	3.87	3.69	4.75
Vegetable crops—										
Grown for sale—										
Beans (green)	25	20	28	cwt	279	449	320	11.16	22.45	11.43
Tomatoes	33	57	42	"	889	1,718	740	26.94	30.14	17.62
Potatoes, English	4	16	19	"	48	809	1,120	12.00	50.56	58.95
Potatoes, sweet	388	532	552	"	19,112	41,638	57,460	49.26	78.27	104.09
Pumpkins	29	59	44	"	1,104	2,532	1,920	38.07	42.92	43.64
Other	149	205	389	..	..	..	..	..	..	..
For consumption on holding—										
Potatoes, sweet	4,212	4,690	4,187	cwt	218,582	242,503	227,760	51.90	51.71	54.40
All other	2,317	1,616	3,574	..	..	..	..	..	..	..
All other crops	3,238	1,251	4,912	..	..	..	..	..	..	..
Total	474,872	477,215	484,132	..	..	..	..	..	..	..

(a) Production from crops purchased from Indigenous growers.

(b) Not available for publication.

**Indigenous agriculture**

Most of the indigenous inhabitants of Papua New Guinea are agriculturalists producing fruit and vegetables for their own consumption. The crops grown vary according to environment and altitude and include yams, taro and sweet potatoes, coconuts, bananas, papaws, maize, sugar cane, cassava, beans, peanuts, rice, cucurbits, and tobacco. Sago is the staple food in the extensive semi-inundated areas which occur along the lower valleys of the major rivers. In these areas it is cut largely from naturally occurring stands. In other parts of the country small areas of sago are grown along stream banks and in swampy patches and are regarded as a reserve in times of poor harvest. In recent years the indigenes have taken up the production of introduced crops such as peanuts, rice, cucurbits, tobacco and maize for their own consumption, and cocoa, coffee, tea, palm oil, passion fruit and pyrethrum for export. Some small-scale rubber growing is now being undertaken. In coastal areas large quantities of copra are produced. In 1970-71 estimated indigenous production was: copra, 46,650 tons; coffee, 19,032 tons; cocoa, 8,053 tons. In many localities the indigenes follow a farming system known as bush fallowing rotation, which is described in Year Book No. 48, and earlier issues.

The growing of food is done by both the men and the women. The division of work is usually clearly defined within the village itself, but this division is not necessarily the same in all areas. Generally the felling of forests is done by the men, and carrying the harvested food home to the village is done by the women. Other work, however, such as cultivating, planting and weeding may be done by either men or women according to the customs of the particular village or area.

The advancement of indigenous agriculture for local food supply and improved land use in village gardens as well as for economic production of crops for sale have a high priority in Government policy for Papua New Guinea. In recent years the Administration has intensified the program of agriculture extension work among the indigenes. Indigenous cattle projects are increasing rapidly, and the greater part of the country's coffee crop is produced by the indigenous sector.

**PAPUA NEW GUINEA: AREA OF PRINCIPAL CROPS AND  
CROP PRODUCTION, YEAR ENDED 30 JUNE<sup>(a)</sup> 1967 TO 1971**

*(Source: Rural Industries Bulletin 1970-71; Papua New Guinea Bureau of Statistics.)*

	Area under crop (acres)			Quantity of production (tons)		
	Indigenous	Non-indigenous	Total	Indigenous (b)	Non-indigenous	Total
<b>Coconuts—</b>						
1967 . . .	305,630	269,127	574,757	34,504	81,159	115,663
1968 . . .	344,540	270,176	614,716	38,644	86,736	125,380
1969 . . .	348,742	271,623	620,365	43,801	89,115	132,916
1970 . . .	335,414	271,836	607,251	42,911	84,482	127,393
1971 . . .	339,681	269,612	609,293	46,650	80,791	127,441
<b>Cocoa—</b>						
1967 . . .	38,075	126,147	164,222	5,032	15,059	20,091
1968 . . .	39,569	129,706	169,275	5,546	18,092	23,638
1969 . . .	44,285	133,235	177,520	5,883	18,134	24,017
1970 . . .	46,724	132,003	178,727	5,792	16,748	22,540
1971 . . .	48,121	135,099	183,220	8,053	17,614	25,667
<b>Coffee—</b>						
1967 . . .	46,613	14,365	60,978	10,566	4,492	15,058
1968 . . .	47,691	14,817	62,508	9,634	4,705	14,339
1969 . . .	49,666	14,685	64,351	14,942	6,196	21,138
1970 . . .	53,195	15,037	68,232	20,895	6,258	27,153
1971 . . .	47,974	15,514	63,488	19,032	7,511	26,543
<b>Pyrethrum—</b>						
1967 . . .	3,815	..	3,815	551	..	551
1968 . . .	2,867	..	2,867	457	..	457
1969 . . .	4,104	..	4,104	398	..	398
1970 . . .	3,275	..	3,275	499	..	499
1971 . . .	2,925	..	2,925	400	..	400
<b>Rubber—</b>						
1967 . . .	2,617	37,043	39,660	23	5,438	5,461
1968 . . .	3,404	35,878	39,282	13	5,711	5,724
1969 . . .	4,222	33,964	38,186	26	5,850	5,876
1970 . . .	5,994	33,958	39,952	28	5,191	5,219
1971 . . .	4,843	32,722	37,565	69	5,746	5,815
<b>Tea—</b>						
1967 . . .	256	n.a.	n.a.	..	n.a.	n.a.
1968 . . .	359	3,746	4,105	5	68	73
1969 . . .	522	5,270	5,792	41	340	381
1970 . . .	646	6,660	7,306	81	890	971
1971 . . .	913	7,373	8,286	262	1,140	1,402

(a) Non-indigenous figures refer to year ended 31 March, for 1967. (b) Includes all produce acquired by purchase from indigenous growers. Excludes amount consumed by growers.



**Livestock**

Total cattle on non-indigenous holdings at June 1971 was 72,925. Indigenous involvement in the cattle industry is being encouraged. An estimated 8,862 head of cattle were owned by indigenes in 1970. Dairy farming is carried out on a small scale near major towns.

A number of British breeds of cattle are represented, but for best results the use of Zebu cross-bred types of cattle is desirable. For dairying the Jersey seems to be the best breed and adapts quite well to tropical conditions.

A central abattoir controlled by the Administration has been set up at Lae and Administration slaughterhouses at Port Moresby, Goroka and Mount Hagen. There are smaller private slaughterhouses at other centres.

The following table shows the numbers of the various kinds of livestock on non-indigenously occupied holdings in Papua New Guinea at 30 June for the years 1969 to 1971.

**PAPUA NEW GUINEA: LIVESTOCK NUMBERS ON NON-INDIGENOUS  
HOLDINGS YEAR ENDED 30 JUNE 1969 TO 1971**

(Source: *Rural Industries Bulletin*, 1970-71, Papua New Guinea Bureau of Statistics)

<i>Kind of stock</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
Horses . . . . .	1,205	975	957
Cattle—			
For dairying—			
Cows—in milk . . . . .	1,290	1,505	1,345
dry . . . . .	1,281	1,307	1,065
Heifers, one year and over . . . . .	911	840	779
Heifer calves, under one year . . . . .	1,086	884	748
Bulls, one year and over . . . . .	299	189	195
Bulls, under one year . . . . .	168	209	119
Total dairying cattle . . . . .	5,035	4,934	4,251
For beef—			
Cows and heifers, one year and over . . . . .	30,415	34,399	36,114
Calves, under one year . . . . .	6,362	7,305	9,094
Bulls, one year and over . . . . .	1,612	2,039	1,876
Bulls, under one year . . . . .	500	900	1,470
Other, one year and over . . . . .	16,804	18,075	20,120
Total beef cattle . . . . .	55,693	62,718	68,674
Total all cattle . . . . .	60,728	67,652	72,925
Sheep . . . . .	381	272	382
Pigs—			
Boars . . . . .	308	352	295
Breeding sows . . . . .	1,088	1,445	1,458
Suckers, weaners, and slips . . . . .	2,726	4,158	4,218
Other . . . . .	476	731	1,325
Total pigs . . . . .	4,598	6,686	7,296
Goats . . . . .	1,407	1,262	641
Poultry(a)—			
Fowls . . . . .	168,757	193,811	172,514
Ducks . . . . .	3,757	3,823	6,304
Turkeys . . . . .	314	285	337
Geese . . . . .	45	105	40
Total poultry . . . . .	172,873	198,024	179,195

(a) Only recorded where poultry products are marketed or flocks exceed 100 birds.

**Survey of indigenous agriculture and ancillary surveys, 1961-62**

A survey of the agriculture of indigenes of Papua New Guinea was carried out in 1961-62 by the Papua New Guinea Bureau of Statistics in conjunction with the Commonwealth Bureau of Census and Statistics and the Papua New Guinea Department of Agriculture, Stock and Fisheries. A comprehensive report on the surveys was published by the Papua New Guinea Statistician in 1963, and reference should be made to this for further information. A summary of the principal results of the survey appears on pages 1104-10 of Year Book No. 52. Statistics of indigenous cash crop and cattle projects are compiled annually by the Administration's Department of Agriculture, Stock and Fisheries.

### Forestry

Many species of tropical timbers are found in Papua New Guinea, and there is a large pure stand of Klinkii pine in the Bulolo Valley. This timber is used mainly for the production of plywood and veneer. The Papua New Guinean forests produce all local timber requirements as well as exports of logs, sawn timber, plywood and veneer. The administration operates a forestry school at Bulolo to train forestry officers, and has established a research centre for forest products at Hohola near Port Moresby as well as regional silvicultural stations and a large herbarium at Lae.

The Administration is making available for public application a number of extensive timber areas estimated to contain a total of about 14,000 million super feet of logs and possibly twice this quantity of pulpwood. It is intended that those areas should form the basis for the development of integrated forest industries, which would be large and economically viable. Feasibility studies have been undertaken by consultants and some interested firms. Subject to negotiation the areas will be allocated on long-term permits. The Administration has acquired from the indigenous peoples timber rights over 4.9 million acres of forest for industrial development. Reforestation of permanently dedicated land is being undertaken by the administration, the area planted to date being 25,423 acres.

At 30 June 1973, 72 permits and 36 licences were current, the total area of forest involved being 2.4 million acres. The total number of sawmills was 68 and the total sawn timber produced during 1972-73 was 60.0 million super feet. Total log production was 352 million super feet (true volume) of which 191.1 million was exported.

### Fisheries

Over 1,400 different species of fish are to be found in the coastal and inland waters of Papua New Guinea and many are important food fish. Those of greatest commercial significance are tunas (mainly skipjack), prawns, barramundi, and tropical lobster. Efforts are being made to encourage indigenous fishermen to regard fishing as a source of cash income and not merely as a means of subsistence. This involves the Administration in research and extension work and requires the improvement of refrigeration, transportation and marketing facilities throughout the country. In the Highlands there is increasing interest in fish culture in freshwater ponds.

Commercial fishing for prawns by joint venture companies is increasing and considerable expansion is likely in the tuna fishery, in which three Japanese and one United States of America joint venture companies are at present engaged.

In 1970-71 the main exports of marine produce from Papua New Guinea were 19,802,000 lb of tuna and 811,630 lb of frozen crayfish tails and prawns valued respectively at \$1,317,000 and \$876,000. Exports of cultured pearls amounted to \$867,000. Other important exports are crocodile skins, marine shell and barramundi.

### Mining

A large number of minerals have been found in Papua New Guinea, including platinum, gold, silver, copper, tin, lead, zinc, cinnabar, iron, osmiridium, manganese, sulphur, chromite, gypsum, lignite and brown coal.

A large low grade copper deposit with ore reserves of 900 million tons of ore containing 0.48 per cent copper and 0.36 dwt per ton gold has been developed by Bougainville Copper Pty Ltd, a partly owned subsidiary of Conzinc Rio Tinto Australia Ltd, with a 20 per cent shareholding by the Administration. Production began in 1972 and ore is expected to be mined at the rate of 30 million tons per annum. Production for 1972-73 was 164,234 long dry tons of copper, 577,706 troy ozs. of gold and 1,275,053 troy ozs. of silver for export.

Before the 1939-45 War, gold was an important item in Papuan production, but it has since dwindled to insignificance. Large quantities of copper ore were mined and exported up to 1940. A large low grade copper ore body is being considered for development in the Star Mountains, near the West Irian border. Extensive deposits of magnetite sands exist along the Gulf of Papua coastline, but these contain the undesirable impurity titanium, and ways of separating this from magnetite are under investigation. The production of gold in New Guinea decreased from \$1,414,238 in 1959-60 to \$792,290 in 1971-72, but will increase greatly in 1972-73.

The laws in operation governing mining are the *Mining Ordinance* 1928-1966, the *Mines and Works Regulation Ordinance* 1935-1962 and the *Mining Development Ordinance* 1955-1960 and the regulations made thereunder.

Indications of oil have been found at scattered locations over a large area, but commercial quantities have not been discovered. Natural gas has been found in several wells in the Gulf District (including offshore), but its commercial use is not yet economically feasible.

At 30 June 1973, 31 permits and licences were effective under the provision of the *Petroleum (Prospecting and Mining) Ordinance* 1951-1968 and the *(Commonwealth) Petroleum (Submerged Lands) Act* 1967-1968.

## Secondary industries

The major manufacturing industries are generally those processing primary products, mainly for exports. Examples of these are plywood, coconut oil, copra by-products, desiccated coconut and pyrethrum.

Industries catering for the rapidly expanding local market remain numerically predominant. These include the brewing of beer, furniture making and assembly of electrical appliances; the production of cigarettes and twist tobacco, aerated waters, clothing, plastic articles, concrete products, glass bottles, drums, industrial gases, chemicals, fibreglass products, nails and other wire products, packaging and paper products, paints, metal louvre frames, wood preservative, metal roofing, water heaters, cast-iron stoves and other building materials, tyre repairs, fire protection equipment, agricultural machinery, matches, printing and ship-building.

A wide variety of services has also been established such as engineering workshops, plumbing establishments, motor repairs and electrical services.

### PAPUA NEW GUINEA: SUMMARY OF FACTORY OPERATIONS 1968-69 TO 1970-71

(Source: *Secondary Industries Bulletin* 1970-71, Papua New Guinea Bureau of Statistics)

	1968-69	1969-70	1970-71
Number of factories(a)	609	669	697
Average number employed(b)	13,287	13,839	14,766
Salaries and wages paid(c)	14,016	15,990	18,269
Value of power, fuel, light, etc., used(d)	1,806	2,053	2,722
Value of materials used(e)	38,382	44,251	52,930
Value of production(f)	35,043	34,939	46,950
Value of output(g)	75,231	86,244	102,603
Value of land and buildings(h)	19,852	22,855	29,412
Value of plant and machinery(h)	24,206	25,538	28,022

(a) Any factory, workshop or mill in which four or more persons are employed or power other than hand is used.  
 (b) Average weekly employment including working proprietors. (c) Excludes drawings by working proprietors.  
 (d) Includes water and lubricating oil. (e) Includes value of containers, packing, etc., tools replaced, and repairs to plant.  
 (f) Value added in process of manufacture (i.e. value of output less value of materials and power, fuel, etc. used).  
 (g) Value of goods produced including amounts received for repair work and other work done. (h) Depreciated or book value at end of year, including estimated value of rented premises and machinery.

### PAPUA NEW GUINEA: FACTORY OPERATIONS BY CLASS OF INDUSTRY, 1970-71

(Source: *Secondary Industries Bulletin* 1970-71, Papua New Guinea Bureau of Statistics)

	Class of industry				Total
	Industrial metals machines and conveyances	Food, drink and tobacco	Sawmills, plywood and joinery	Other industries	
Number of factories	338	110	152	97	697
Number of employees—					
Non-indigenous	n.a.	n.a.	n.a.	n.a.	2,531
Indigenous	n.a.	n.a.	n.a.	n.a.	12,235
Total employees	5,126	3,655	3,923	2,062	14,766
Salaries and wages paid	9,253	2,581	3,567	2,869	18,269
Value of power, fuel and light, etc.	479	713	367	1,163	2,722
Value of materials used	13,682	20,054	7,529	11,665	52,930
Value of production	16,506	11,353	9,100	9,991	46,950
Value of output	30,667	32,120	16,996	22,820	102,603

See footnotes to previous table.

NOTE. Electricity generation is included in 'Other industries'.



## Electric power generation and distribution

### Electric power generation and distribution

*Papua New Guinea Electricity Commission.* Responsibility for the operation and establishment of the electrical undertakings in Papua New Guinea is vested in the Papua New Guinea Electricity Commission whose headquarters are located at Port Moresby. The Papua and New Guinea Electricity Commission as it was then known was established by the *Papua and New Guinea Electricity Commission Ordinance* 1961 and on 1 July 1963 acquired the assets of the Electrical Undertakings Branch of the Department of Public Works. In Papua New Guinea the Commission owns and operates the electrical undertakings at Port Moresby, Lae, Rabaul, Madang, Wewak, Goroka, Kavieng, Samarai, Yonki, Kerevat and Kieta. It also maintains, operates and carries out administrative functions relating to the electrical undertakings at Mount Hagen, Kundiawa and Kainantu. In addition, it has regulatory functions associated with the licensing of electricians and contractors, the control of franchise holders, the approval of appliances and electrical materials for use in Papua New Guinea, and it operates showrooms at major centres for the purpose of selling electrical appliances.

*Generating facilities.* The Commission owns and operates hydro-electric power stations at Port Moresby, diesel and hydro-electric stations at Goroka and diesel stations at other centres. At Lae, local diesel generation is supplemented by purchases of power in bulk from the Baiune Hydro-electric Power Stations of Commonwealth New Guinea Timbers Ltd. At Kieta the Commission purchases bulk power generated in the Bougainville Copper Pty Ltd steam power station at Anewa Bay. The installed capacity of generating plant at centres owned or managed by the Commission at 30 June 1973 was as follows.

<i>Centre</i>	<i>kW</i>
Port Moresby . . . . .	(a)37,020
Lae . . . . .	(b)13,040
Rabaul . . . . .	5,360
Madang . . . . .	5,900
Goroka . . . . .	(c)2,871
Wewak . . . . .	2,090
Kavieng . . . . .	660
Samarai . . . . .	440
Yonki . . . . .	1,600
Kerevat . . . . .	1,035
Mount Hagen . . . . .	(d)2,225
Kandiawa . . . . .	300
Kainantu . . . . .	300
<b>Total . . . . .</b>	<b>72,841</b>

(a) Includes 1,520 kW hydro set being commissioned.  
 (b) Includes 3,200 kW diesel set being commissioned.  
 (c) Includes 600 kW hydro. (d) Includes 124 kW hydro.

The total substation capacity of all the Commission systems combined amounts to approximately 101,785 kVA divided up among 694 stations. The number of consumers served by the Commission at 30 June 1973 was estimated as 23,574.

The Commission also maintains the generating plant and distribution systems in minor centres acting as an agent of, and from funds provided by, the Government. The installed capacity of continuous duty generating plant in the 135 minor power stations owned by the Government at 30 June 1973 was approximately 8,130 kW, excluding emergency plant. The centres of Wau, Bulolo, Kupiano, Napa Napa, Gemo Island and Banz are supplied by private electrical undertakers under franchise from the Commission.

The demand for power throughout Papua New Guinea continues to increase, although the rate of growth has lessened. In Port Moresby, contracts have been let for the installation of two 6 mW sets at Rouna No. 3 Power Station which is under construction alongside the existing Rouna No. 1 Station. When commissioned in mid-1974 this Station will boost the city's installed generating capacity to 49 mW.

New diesel plant was commissioned at Madang, Goroka and Kerevat during the year ended 30 June 1973 and the installation of two 3.2 mW diesel sets at Lae Power Station was nearing completion.

Contracts have been let for the design, manufacture and installation of three 15 mW generators at the Ramu No. 1 hydro-electric power station. Stage 1 of which is under construction near Kainantu in the Eastern Highlands. Work has also commenced on the erection of some 330 miles of high-voltage transmission lines which will interconnect the new station with the towns of Lae, Madang, Goroka, Mount Hagen and some smaller Highland centres. This scheme is scheduled for commissioning in mid-1975.

*Future development.* The Commission is investigating other power developments for Port Moresby. Alternatives include Rouna No. 4 Power Station of 12 mW, Musa River Hydro-electric Scheme which may be built in stages to the ultimate potential of about 400 mW and the possible inter-connection of the Port Moresby System with the Ramu Scheme. Economic feasibility studies are being carried out to determine the pattern of development of the Ramu Scheme as well as supply to possible copper ore projects near the West Irian border. Alternatives being considered include further power stations and a dam (at Yonki) on the Ramu River, and another power station on the Waga River near Mendi.

In conjunction with a large Japanese firm of consulting engineers, the office studies and field investigations continue for the utilisation of the over 1500 mW power potential of the Purari River. To cater for the future power requirements of the developing timber and oil palm industries in West New Britain, investigations have commenced to evaluate the hydro power potential of the Lobu River near Lake Hargy.

### Trade, transport and communication

#### Value of imports and exports

##### PAPUA NEW GUINEA: IMPORTS AND EXPORTS, 1967-68 TO 1971-72 (\$A'000)

(Source: *Overseas Trade Statistics*, Papua New Guinea Bureau of Statistics)

	1967-68	1968-69	1969-70	1970-71	1971-72
<b>Total imports(a)</b>	<b>(b)145,303</b>	<b>150,455</b>	<b>213,051</b>	<b>254,599</b>	<b>256,386</b>
Exports—					
Domestic exports	59,089	64,896	71,443	77,447	93,039
Re-exports	11,161	10,348	22,117	24,485	34,142
<b>Total exports</b>	<b>70,250</b>	<b>75,244</b>	<b>93,560</b>	<b>101,932</b>	<b>127,181</b>

(a) Includes value of outside packages. (b) Includes floating oil rig valued at \$8 million, re-exported in July 1969.

#### Country of origin or destination

##### PAPUA NEW GUINEA: COUNTRY OF ORIGIN OF IMPORTS, 1967-68 TO 1971-72 (\$A'000 f.o.b. port of shipment)

(Source: *Overseas Trade Statistics*, Papua New Guinea Bureau of Statistics)

Country of origin	1967-68	1968-69	1969-70	1970-71	1971-72
Australia	78,108	82,165	114,332	130,395	141,330
Canada	852	1,162	3,012	2,066	2,556
Ceylon	366	341	342	329	328
China, People's Republic of	1,715	2,758	2,254	2,201	1,905
France	825	1,402	1,668	1,031	823
Germany, Federal Republic of	2,739	3,448	3,933	3,893	4,598
Hong Kong	4,583	4,760	5,654	7,542	6,121
Italy	1,449	746	1,122	895	1,347
Japan	14,448	17,849	26,393	42,650	38,009
Malaysia and Singapore	3,874	4,357	5,692	6,685	9,648
Netherlands	880	913	2,046	2,795	3,828
New Zealand	77	841	2,618	2,727	3,169
Sweden	480	610	613	640	638
United Kingdom	7,213	8,574	12,347	9,823	11,415
United States of America	(a)19,613	11,589	22,556	29,585	20,232
Other countries	8,081	8,940	8,469	10,342	10,439
<b>Total</b>	<b>145,304</b>	<b>150,455</b>	<b>213,051</b>	<b>254,599</b>	<b>256,386</b>

(a) Includes floating oil rig valued at \$8 million.

## PAPUA NEW GUINEA: COUNTRY OF DESTINATION OF EXPORTS, 1967-68 TO 1971-72

(\$A'000 f.o.b. port of shipment)

(Source: Overseas Trade Statistics, Papua New Guinea Bureau of Statistics)

Country of destination	1967-68	1968-69	1969-70	1970-71	1971-72
Australia . . . . .	29,288	29,548	41,295	43,373	53,245
Germany, Federal Republic of . . . . .	4,656	8,403	7,549	5,377	17,590
Japan . . . . .	4,652	3,732	8,560	11,813	21,377
Netherlands . . . . .	2,194	3,869	4,303	2,066	1,537
United Kingdom . . . . .	20,279	18,769	15,394	19,567	13,264
United States of America . . . . .	5,403	5,662	11,076	13,337	10,710
Other countries . . . . .	3,778	5,261	5,383	6,399	9,458
<b>Total . . . . .</b>	<b>70,250</b>	<b>75,244</b>	<b>93,560</b>	<b>101,932</b>	<b>127,181</b>

## Principal commodities exported

## PAPUA NEW GUINEA: PRINCIPAL DOMESTIC EXPORTS, 1967-68 TO 1971-72

(\$A'000 f.o.b. port of shipment)

(Source: Overseas Trade Statistics, Papua New Guinea Bureau of Statistics)

Commodity	1967-68	1968-69	1969-70	1970-71	1971-72
Copra . . . . .	13,943	14,804	13,340	14,209	9,392
Other coconut products(a) . . . . .	7,405	6,361	7,619	9,901	6,476
Coffee beans . . . . .	14,320	15,531	20,182	20,572	20,458
Cocoa beans . . . . .	11,794	16,060	15,549	13,643	11,109
Timber(b) . . . . .	2,662	2,296	3,796	6,401	6,988
Plywood(c) . . . . .	2,429	2,504	2,529	2,505	212
Rubber(d) . . . . .	1,956	2,276	2,798	2,297	1,995
Gold . . . . .	825	807	824	720	814
Crayfish and prawns . . . . .	978	268	659	875	2,051
Crocodile skins . . . . .	509	473	452	264	198
Peanuts . . . . .	430	469	550	518	616
Pyrethrum extract . . . . .	417	313	332	286	227
Passionfruit juice . . . . .	202	122	131	1	288
Tea . . . . .	42	297	645	1,094	1,500
Other . . . . .	1,177	2,315	2,037	4,161	30,715
<b>Total . . . . .</b>	<b>59,089</b>	<b>64,896</b>	<b>71,443</b>	<b>77,447</b>	<b>93,039</b>

(a) Dessicated coconut, copra oil and copra pellets. (b) Logs and sawn timber. (c) Plywood, veneer and battery veneer. (d) Raw and scrap rubber.

## Shipping

In 1971-72 shipping entries (excluding coastal shipping and cargoes) at Papua New Guinea ports totalled 2,031, and 1,627,000 tons of cargo were discharged and 976,000 tons were loaded. Corresponding figures for 1970-71 were 2,019, 1,498,000 and 865,000 respectively.

Regular passenger and freight services operate between Australia and Papua New Guinea. Vessels trading between Australia and the East also call at Papua New Guinea ports, and there are services from continental and United Kingdom ports. Coastal and inter-island shipping services are maintained by vessels operating from the principal ports of the country.



**Other forms of transport and communication**

Scheduled flights provide a network of air transport throughout Papua New Guinea and regular air services link the country with Australia and neighbouring countries, also with Manila, Hong Kong, Honiara and Jaipura. There were 441 licensed aerodromes in the whole of Papua New Guinea at 30 June 1973, and of these 10 were the responsibility of the Department of Civil Aviation, 136 are Papua New Guinea Government owned commercial airfields, 94 are privately (i.e. non Government) owned commercial airfields and 201 are restricted airfields either Papua New Guinea Government or privately owned. Much of the internal traffic and freight is carried on a charter basis.

**PAPUA NEW GUINEA: AIR TRANSPORT; SUMMARY OF SCHEDULED AND CHARTER SERVICES, 1967-68 TO 1971-72**

	<i>Overseas services(a)</i>			<i>Internal scheduled services(b)</i>			<i>Internal charter services</i>		
	<i>Passengers embarked</i>	<i>Freight</i>	<i>Mail</i>	<i>Passengers embarked</i>	<i>Freight</i>	<i>Mail</i>	<i>Passengers embarked</i>	<i>Freight</i>	<i>Mail</i>
	No.	short tons	short tons	No.	short tons	short tons	No.	short tons	short tons
Year ended 30 June—									
1968 .	114,015	2,460	476	244,467	4,989	900	103,136	29,506	
1969 .	132,557	2,794	534	280,618	4,927	902	106,212	25,618	138
1970 .	166,078	3,298	583	346,440	6,538	975	112,973	25,104	102
1971 .	195,490	3,358	633	425,554	7,358	1,080	216,350	22,372	118
1972 .	206,755	3,325	608	472,641	8,107	1,080	233,144	21,867	104

(a) Services to ports outside Papua New Guinea.

(b) Internal scheduled airline services only.

At January 1972 there were 10,117 miles of roads in the country. Total motor vehicle registrations (excluding defence force vehicles) at 31 December 1971 were 38,163.

Telephone services operate between the main centres by radio telephone. These together with telex and telegraph services are operated within the country by the Department of Posts and Telegraphs, while overseas traffic is handled by the Overseas Telecommunications Commission. The Australian Broadcasting Commission broadcasts on medium wave and short wave from Port Moresby and Rabaul. The Administration Department of Information and Extension Services operates transmitters at a number of centres, broadcasting programs in several local languages.

### Indigenous labour

From an estimated 190,000 indigenous workers, some 140,000 were enumerated in the Department of Labour count of the indigenous labour force as at 30 June 1970. Of the enumerated indigenous labour force, 29 per cent were employed by the Papua New Guinea Government and Australian Government Departments. Private industry employed 71 per cent. The larger industries employed the following percentages of the workforce; rural industry, 30 per cent; building and construction, 11 per cent; commerce, 11 per cent; manufacturing, 7 per cent and transport and storage, 5 per cent. Of the uncounted 50,000, approximately 8,000 were in private domestic service, 3,000 were enlisted Service personnel, and most of the balance were employed in the rural sector. The number of skilled indigenous workers continues to increase.

At 31 December 1971, 1,135 tradesmen, including 5 expatriates, had satisfactorily completed their indentures in 29 trades and had been awarded completion certificates. At the same date 1,618 apprentices, including 52 expatriates, were undertaking indentures under provisions of the *Papua New Guinea Apprenticeship Ordinance 1967-1970*. In addition there are approximately 650 vacancies notified for the 1972 intake. It is expected that approximately 450 apprentices will satisfactorily complete their indentures during the period 1 January to 30 June 1972.

Minimum conditions of employment for Papua New Guinean workers are prescribed by statute under the *Native Employment Ordinance* 1958–1971, and the *Public Service (Papua and New Guinea) Ordinance* 1964–1971. The minimum rate of pay is prescribed under the *Industrial Relations Ordinance* 1962–1971, and can further be raised by a Minimum Wage Board which may be established under that ordinance. Conditions of employment and wage rates are also prescribed by awards negotiated by agreement between organisations of employers and employees and by determinations of arbitral tribunals established under the *Industrial Relations Ordinance* 1962–1971 and the *Public Services Conciliation and Arbitration Ordinance* 1969–1970.

The minimum statutory wage for an unskilled worker is \$5.90 a week. Where a worker is provided with accommodation, food, clothing and other issues, deductions may be made from the cash wage by agreement between employer and employee up to legally prescribed limits or as authorised by a District Labour Officer of the Department of Labour. The maximum permissible deductions for accommodation and food are 87 cents and \$2.50 a week respectively.

General employment awards are in force in Lae, Goroka, Mount Hagen, Madang, Wewak, Kavieng, Rabaul, Lorengau, Popondetta, Samarai-Alotau and Bwagaoia and Port Moresby. These agreements apply to all workers employed by members of the Employer's Federation regardless of whether or not they are members of a Workers' Organisation (other than those employees directly engaged in primary production, domestic duties, stevedoring operations in shipping services or apprentices indentured under the *Apprenticeship Ordinance* 1967–1970). In many of the above centres or localities the agreements are applied to all workers engaged not only by members of the Employers' Federation but also by employers who are not members of the Federation due to common rules being declared. The agreements cover annual and sick leave entitlements and rates of pay and conditions of employment for workers in those areas. In all cases the agreements are negotiated between the Employers' Federation of Papua New Guinea and the local workers' association or union.

In addition to agreements applying to workers in particular localities there are also awards which apply to workers in particular industries, e.g. stevedoring, timber, building and construction, mining and shipping.

The minimum wage rates for adult unskilled workers in industries and locations covered by awards and agreements range between \$6.50 and \$11.50 a week. Margins for skill are prescribed for semi-skilled and skilled workers ranging up to about \$30 a week.

The *Industrial Organizations Ordinance* 1962–1970 provides for the registration and control of industrial organisations. At 30 June 1973 there were forty-four registered employees' organisations in Papua New Guinea with a total membership of 36,073 workers, of which 32,615 are Papua New Guineans. Twelve of the above employee organisations have joined together to form the Federation of Workers' Associations of Papua New Guinea. Another four have joined together to form a Council of Trade Unions which was registered on 31 May 1973.

The Bureau of Industrial Organisations is a statutory authority established on 23 March 1972. The functions of the Bureau are to provide advice and assistance in the establishment, administration and development of industrial organisations and to provide courses and programs of training for members and officials of industrial organisations.

The Papua New Guinea Labour Advisory Council advises the Administrator's Executive Council and the Government on labour matters generally, and in particular on:

- methods of improving industrial relations,
- measures needed to achieve full and efficient use of the country's manpower,
- methods of bringing about rapid localisation of the work force in the private sector and incentives and other measures to achieve this end,
- measures to improve productivity, and
- trade union development.

## Housing

Village housing is constructed to traditional patterns using local materials including bush timber, bamboo, grass, pit-pit and sago palm leaves. Town housing is generally constructed from comparatively expensive imported material including fibrous asbestos cement, aluminium and galvanised iron. The majority of houses are timber framed and made from both locally milled and imported timber.

The rapid growth of urban areas consequent upon increased economic development has created a housing shortage. Major programs are directed towards reducing this shortage.

The Housing Commission was established in 1968, with charter to construct housing and accommodation for all sections of the community. The intention is for the Commission to progressively assume responsibility for all Administration houses in its areas of operation. The Commission currently operates in Port Moresby, Lae, Madang, Rabaul and Goroka.

The major urban centres in Papua New Guinea have squatter settlement problems. Squatter houses are mostly of the substandard shanty type. The Administration and the Housing Commission are assisting squatters with self-help housing schemes in both existing squatter settlements and new resettlement areas by providing housing allotments, supervisory staff, building materials at cost price, and basic services. Self-help housing schemes are to be expanded significantly over the next five years, particularly in the major urban centres.

## Education and health

### Education

Schools in Papua New Guinea are conducted by the Papua New Guinea Government and various Christian missions. In February 1970 the Australian Government adopted the recommendations of the Advisory Committee on Education in Papua New Guinea, and the House of Assembly subsequently passed the *Education (Papua New Guinea) Ordinance, 1970* and the *Teaching Service (Temporary Provisions) Ordinance 1970*. The new legislation provided for the voluntary merger as from 1 July 1970 of mission schools and colleges and teaching staff, with those of the Administration, into a unified National Education System and a single National Teaching Service. A representative National Education Board and a number of District Education Boards were created to advise on educational planning and administration at the national and district levels respectively. A Teaching Service Commission was also created to employ teachers and to determine their salaries and conditions of service.

At 30 June 1972 there were 227,699 children enrolled in 1,658 primary schools in the Papua New Guinea national education system; and a further 30,350 enrolled in 151 secondary technical and vocational schools. Some 6,688 of the 9,062 teachers employed in schools were Papua New Guineans. Qualified teachers are recruited from Australia and overseas and some are trained at the Canberra College of Advanced Education, and in 12 teachers' colleges in Papua New Guinea, 11 of these are primary colleges and one secondary, conducted by the missions and the Papua New Guinea Government.

At the post-secondary level of education there are a range of specialist vocational training institutions including two Universities.

The University of Papua New Guinea and the Papua New Guinea University of Technology are autonomous institutions offering courses at both degree and diploma level. The University of Papua New Guinea has faculties of Arts, Law, Science, Education, Medicine and Agriculture. In 1973 there were 1,020 full-time and 407 part-time students enrolled in degree, diploma and post-graduate courses. Of these 1,004 are Papua New Guinean students. As at May 1973 there had been a total of 192 graduates from the University of whom 105 were Papua New Guineans.

The University of Technology offers degree and diploma courses in civil, electrical and mechanical engineering, architecture, building, surveying, valuation and chemical technology. Certificate level courses are also being introduced as needed. There were 535 Papua New Guineans and 11 expatriates enrolled at the University of Technology in 1973. The total number of graduates as at December, 1972 was 42, of whom 38 were Papua New Guineans.

There are four technical colleges in Papua New Guinea offering a wide range of trade apprenticeship and secretarial courses. Certificate level courses are available in the engineering, building and commercial fields. The Vudal Agricultural College offers a post form IV Diploma course in agriculture and lower level certificate courses are provided at two agricultural training centres. The Bulolo Forestry College offers a diploma course in Forestry.

There are three Government and seven Mission Primary Teachers' Colleges. Secondary Teacher training is provided at the Goroka Teachers' College and at the University of Papua New Guinea. Most of the other post-secondary institutions are operated by government departments and include the Co-Operative College, Police College, Public Service Board Administrative College, Local Government Council Staff College and the Para Medical Colleges. To ensure that there is co-ordination among post-secondary training institutions and that the future development of post-secondary courses is related to Papua New Guinea manpower needs, the Government has now established an Office of Higher Education within the Department of the Chief Minister.

*School of Pacific Administration.* In November 1971, the Commonwealth Government decided that the Australian School of Pacific Administration at Mosman, Sydney, would be developed as an important centre for training Papua New Guineans.



In its new role, the School is supplementing training and undertaking specially structured training which cannot be better or more conveniently provided in Papua New Guinea or elsewhere in Australia. The School is concentrating on administrative and specialised training to prepare Papua New Guinean Public Servants.

The School's program provided for over 296 Papua New Guineans to attend courses during 1973. Of this number, 120 have undertaken vocationally oriented courses of 8 months duration to upgrade their qualifications for advancement within the Papua New Guinea Public Service. The balance of trainees undertook shorter courses in advanced administrative and executive development training, industrial relations and local government practice.

### Health

The Department of Public Health of Papua New Guinea has the general oversight of all medical and dental services. The Department has the following seven functional divisions: medical services, preventive medicine, medical training, maternal and child health, dental education, administrative services, and mental health. To facilitate administration and co-ordination of the field services of the Department of Public Health, Papua New Guinea is divided into four geographical regions: the New Guinea Mainland, Highlands, New Guinea Islands Region and Papua.

### Finance

#### Revenue and expenditure

#### PAPUA NEW GUINEA: REVENUE AND EXPENDITURE, 1968-69 TO 1973-74 (\$'000)

	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74(a)
REVENUE						
Customs . . . . .	17,669	23,951	30,960	33,135	34,141	36,100
Licences . . . . .	814	907	1,038	1,440	1,535	1,550
Stamp duties . . . . .	553	870	683	964	833	750
Postal . . . . .	4,682	5,289	(b)	(b)	(b)	(b)
Land revenue . . . . .	832	1,102	1,098	1,200	1,566	1,750
Mining receipts . . . . .	72	116	241	153	1,859	2,005
Fees and fines . . . . .	364	459	567	647	845	1,040
Health revenue . . . . .	352	464	676	725	658	660
Forests . . . . .	547	684	923	938	1,203	1,380
Agriculture . . . . .	1,015	1,011	1,021	1,053	1,233	1,770
Public utilities . . . . .	1,173	1,273	1,653	1,791	1,812	1,450
Direct taxation . . . . .	17,187	21,075	29,375	36,117	38,229	41,900
Miscellaneous . . . . .	4,614	5,381	5,953	6,708	9,153	19,145
Recoverable services . . . . .	5,264	9,862	9,478	10,382	..	..
<i>Total internal revenue(c)</i> . . . . .	<i>55,137</i>	<i>72,442</i>	<i>83,666</i>	<i>95,253</i>	<i>93,067</i>	<i>109,500</i>
General loans . . . . .	7,183	(d)6,736	15,587	25,540	27,600	33,250
Grant by Australian Government . . . . .	87,271	97,271	(e)70,000	(e)69,875	(e)82,863	(e)138,250
International loans . . . . .	51	1,384	2,620	8,131	7,869	21,250
Australian Government loans . . . . .	..	5,000	6,300	11,700	4,400	2,200
Special Loan—Purchase of Equity in Bougainville Copper Ltd . . . . .	..	12,500	12,500	..	..	..
Consolidated revenue . . . . .	..	344	203	..	367	..
<b>Total revenue . . . . .</b>	<b>149,642</b>	<b>195,677</b>	<b>190,876</b>	<b>210,499</b>	<b>216,166</b>	<b>304,450</b>

For footnotes see end of table next page.

PAPUA NEW GUINEA: REVENUE AND EXPENDITURE, 1968-69 TO 1973-74—*continued*  
(\$'000)

	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74(a)
EXPENDITURE						
Special appropriations . . . . .	5,734	(d)5,567	13,295	13,943	14,174	17,691
Administrator(f) . . . . .	1,327	9,278	6,491	8,056	9,700	..
Government House Office(g) . . . . .	..	..	..	..	..	80
Chief Minister and Development Administration(h) . . . . .	..	..	..	..	..	7,664
Foreign Relations and Trade(i) . . . . .	..	..	..	..	..	1,652
House of Assembly . . . . .	291	383	409	377	393	482
Information and extension services . . . . .	1,187	1,239	1,171	1,600	1,603	1,998
Public Service Board . . . . .	1,550	1,838	1,155	1,367	2,290	2,945
Finance (formerly Treasury) .. . . .	11,623	3,313	4,928	3,948	3,800	4,045
Public health . . . . .	12,217	14,255	13,231	14,491	16,242	18,804
Social development and home affairs(j) . . . . .	..	6,953	5,297	7,089	9,937	13,280
District administration(k) . . . . .	6,570	..	..	..	..	..
Labour . . . . .	778	957	741	880	1,037	902
Education . . . . .	17,214	21,204	17,939	20,758	25,230	28,708
Agriculture, stock and fisheries . . . . .	7,492	8,751	7,209	7,983	9,081	10,409
Royal Papua New Guinea Constabulary . . . . .	6,671	7,965	7,689	7,908	9,627	10,065
Law . . . . .	2,930	4,009	3,705	4,556	2,107	2,171
Lands, surveys and mines . . . . .	3,270	5,321	4,780	4,398	4,115	4,711
Forests . . . . .	2,469	2,677	2,082	2,367	2,509	2,554
Posts and Telegraphs . . . . .	5,688	7,661	6,774	6,519	4,791	5,191
Trade and industry(f) . . . . .	2,826	3,243	817	647	754	..
Transport(l) . . . . .	..	..	2,504	2,984	3,351	10,806
Business development(m) . . . . .	..	..	377	865	1,012	1,075
Stores for resale . . . . .	1,625	5,677	5,368	6,410	..	..
Public works . . . . .	7,115	8,105	5,564	5,677	5,594	4,166
General overheads . . . . .	2,241	2,745	2,540	2,817	2,220	2,239
Maintenance . . . . .	12,217	14,046	15,698	17,040	18,211	19,300
Capital works . . . . .	21,379	28,215	29,675	40,000	33,392	35,000
Other institutions . . . . .	11,498	15,474	15,022	22,868	30,313	61,824
Motor transport . . . . .	3,214	3,555	3,482	3,659	..	..
Government printer . . . . .	361	446	417	538	..	..
Purchase of investments . . . . .	..	12,500	12,500	..	..	1,219
Special advance to the Secretary of Finance . . . . .	..	..	..	..	4,683	35,469
<b>Total . . . . .</b>	<b>(n) 149,485</b>	<b>(n)195,377</b>	<b>(n)190,860</b>	<b>(n)209,745</b>	<b>216,166</b>	<b>304,450</b>

(a) Estimated. (b) Postal Revenue is retained by the Department of Posts and Telegraphs in accordance with the change to commercial accounting for that Department. (c) Refunds of revenue have been deducted from gross collections by items. (d) The Budget figure for General Loans and Special Appropriations is reduced by \$8.9 million as this amount was borrowed and repaid during the year. (e) As from 1970-71, the following additional amounts which were not part of the Papua New Guinea Budget, were provided by the Australian Government: for Australian Staffing Assistance (salaries and allowances) in 1970-71, \$31.5 million was provided; in 1971-72 \$38.3 million and in 1972-73 \$43.3 million. Also \$0.8 million was provided for Termination and Retirement Benefits, and \$1.1 million for Emergency Food Relief in the Highlands. In 1973-74, \$49.9 million will be provided by the Australian Government for Australian staffing assistance, and \$17.8 million for Termination and Retirement Benefits. (f) Abolished in 1972-73. (g) New Office established in 1972-73, formerly included in Department of the Administrator. (h) New Department established in 1972-73 which includes former sections of the Department of the Administrator. (i) New Department established in 1972-73 which includes former sections of the Department of Trade and Industry and the Department of the Administrator. (j) New department established in 1969-70; includes former sections of the Department of the Administrator, Department of the Treasury and the former Department of District Administration. (k) Abolished in 1969-70—functions taken over by the Department of the Administrator and the Department of Social Development and Home Affairs. (l) New Department established in 1971 from former sections of Departments of the Administrator, Treasury and Trade and Industry. (m) New Department established in 1970-71 which includes former sections of Department of Trade and Industry. (n) Amount reduced by taxation refunds and refunds of revenue.

### Taxation

The main forms of taxation are income tax and import duties. *Income Tax* was imposed on 1 August 1959 to operate from 1 July 1959. In the case of individuals two different methods of calculating tax payable are used. Tax on taxable incomes has applied since 1 July 1959 and is calculated on a similar basis to that in Australia. Income Tax is about two thirds of the tax payable on the same taxable income in Australia. Tax on chargeable income was introduced to apply from 1 January 1967 and has supplanted a previous *Personal Tax* of \$4 payable by all males eighteen years and over.

Chargeable income consists of gross income less expenses directly incurred in earning the income. No deductions are allowable for dependants or any other private expenditure such as medical or education expenses. The tax is a flat rate of 2.00 cents in the \$1 applying on income above \$416 with a maximum of \$20.00. The two methods of calculating tax payable are supplementary, the method applied to any particular taxpayer being the one resulting in the greater amount of tax payable. Companies are taxed on a similar basis to that in Australia, and deductions allowable are generally comparable to those in Australia. From 1 July 1959 to 30 June 1967 the rates on public and private companies differed, public companies being taxed at a flat rate of 20 cents in the \$1 and private companies at 12.5 cents in the \$1 for the first \$10,000 and 17.5 cents in the \$1 for the remainder. From 1 July 1971 a flat rate of 25 cents in the \$1 applies to all companies, and from the same date private companies are no longer required to distribute a portion of their income in dividends each year. As from 1 July 1972, companies paying a dividend to shareholders resident outside Papua New Guinea are required to deduct and pay a dividend withholding tax of 15 per cent. To encourage industry in Papua New Guinea certain companies manufacturing products new to Papua New Guinea may be granted complete tax exemption for the first five years of operation under the *Industrial Development (Incentive to Pioneer Industries) Ordinance 1965-1969*. This includes exemptions from the dividend withholding tax. In addition to income taxes the Native Local Government Councils (which are formed voluntarily by the indigenes) are empowered to levy local taxes for the purpose of providing for local services carried out by the councils. These taxes are set off against the taxpayers' personal taxation.

Papua New Guinea has a single column tariff applying to all goods regardless of country of origin. The present *Customs Tariff* provides high revenue rates on imports of ale, spirits, tobacco and cigarettes, timepieces, cigarette papers, fancy goods, and jewellery, but allows entry duty free or at a low rate of duty on most necessities affecting living and building costs. Under the Customs Tariff, plant, machinery and chemicals to be used mainly for industrial and developmental purposes are generally duty-free. A by-law covers goods imported by passengers. No preferential rates are specified in the schedule. Export duties imposed on copra, cocoa, rubber, mother-of-pearl, trochus and burgos shell, and gold were repealed in July 1959.

Provision is made in the *Australian Customs Tariff* for the free entry into Australia of certain goods produced in and imported direct from Papua New Guinea (see Chapter Overseas Transactions). In addition, goods produced or manufactured in Papua New Guinea and imported directly into Australia are exempted from primage duty.

Effective from 2 September 1970, a general levy of 2½ per cent was imposed, subject to certain exemptions on all goods imported into Papua New Guinea. Exemptions apply in the main to goods imported by the Administration and/or the Australian Government and their statutory authorities, goods imported for the use of charitable organisations and goods used for educational, health or medical services or for scientific research.

This levy, although administered by the Comptroller of Customs is not a Customs Duty and does not affect rates of duty imposed under the Customs Tariff.

### Banking

The banking system in Papua New Guinea is based on Australia's, and provides full trading and savings bank facilities. Four Australian trading banks have branches in the main centres. They are: the Commonwealth Trading Bank of Australia, the Bank of New South Wales, Australia and New Zealand Banking Group and the National Bank of Australasia Ltd. Affiliates or subsidiaries of banking institutions operate savings banks in the Territory. Rates of interest for bank deposits and advances are the same as those applying in Australia. A branch of the Reserve Bank of Australia in Port Moresby carries out central bank functions and acts as banker for the Administration and Commonwealth Government Departments in the Territory. The Territory uses the same currency as Australia.

The Banking (Foreign Exchange) Regulations of the Commonwealth of Australia apply to Papua New Guinea. All remittances abroad require exchange control approval, though in practice no restrictions are imposed on current transactions and the trading banks have been authorised to deal with the great majority of these transactions as agents of the Reserve Bank.

Average weekly deposits of cheque-paying banks in Papua New Guinea for the year 1971-72 were \$49,966,000 and loans, advances, including term loans and farm development loans, \$108,088,000. Average weekly debits to customers' accounts amounted to \$33,527,000. Savings banks depositors' balances at 30 June 1972 amounted to \$45,683,000, comprising indigenous \$19,085,000 and non-indigenous \$26,599,000 having increased since June 1961 from \$2,999,000 and \$9,663,000 respectively. Average weekly level of loans, advances, bills etc during 1971-72 were \$16,663,000.



The Papua New Guinea Development Bank was established in 1967 to provide finance for primary production, manufacturing and commerce. In early 1972 the Papua New Guinea Investment Corporation was established to acquire equity interests in major enterprises in Papua New Guinea for disposal to Papua New Guinea institutions and individuals.

#### Co-operative societies

Co-operatives are under the guidance of the Department of Business Development. The present structure of the co-operative movement is based on primary societies, associations of societies, regional unions and a Territory-wide Federation formed by the unions. At 31 March 1971 there were 340 primary societies with 139,000 members. Turnover exceeded \$7 million including \$5 million from produce. In addition there are service organisations for wholesale trade, insurance and shipping. A Co-operative College is being set up near Port Moresby with United Nations Development Programme and International Labour Organisation assistance. The first buildings were opened in May 1971.

### HEARD ISLAND AND McDONALD ISLANDS

These islands, about 2,500 miles south-west of Fremantle, were transferred from the United Kingdom to Australia as from 26 December 1947. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard Island and McDonald Islands by the *Heard and McDonald Islands Act* 1953. In 1968, the responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply, and in 1972 the responsibility was transferred to the Minister for Science.

In December 1947 an Australian scientific station was established on Heard Island, and meteorological investigations were conducted until the station was closed in March 1955 following the establishment of Mawson station on the Antarctic mainland. Australian expeditions have since visited the island from time to time. Heard Island is about twenty-seven miles long and thirteen miles wide. The McDonald Islands are twenty-six miles to the west of Heard Island. They are small, rocky and precipitous. The first known landing on McDonald Island, the largest of the group of the same name, took place on 27 January 1971 when two members of the Australian National Antarctic Research Expeditions (ANARE) paid a short visit on their way to the Heard Island Station.

### AUSTRALIAN ANTARCTIC TERRITORY

An Imperial Order in Council of 7 February 1933 placed under Australian authority all the islands and territories other than Terre Adélie situated south of 60° S. latitude and lying between 160° E. longitude and 45° E. longitude. The Order came into force with a Proclamation issued by the Governor-General on 24 August 1936 after the passage of the *Australian Antarctic Territory Acceptance Act* 1933. The boundaries of Terre Adélie were definitively fixed by a French Decree of 1 April 1938 as the islands and territories south of 60° S. latitude lying between 136° E. longitude and 142° E. longitude. The *Australian Antarctic Territory Act* 1954 declared that the laws in force in the Australian Capital Territory, are so far as they are applicable and are not inconsistent with any ordinance made under the Act, in force in the Australian Antarctic Territory. In 1968, responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply, and in 1972 the responsibility was transferred to the Minister for Science.

On 13 February 1954 the Australian National Antarctic Research Expeditions (ANARE) established a station on Mac-Robertson Land at latitude 67° 36' S. and longitude 62° 53' E. The Station was named Mawson in honour of the late Sir Douglas Mawson and was the first permanent Australian station to be set up on the Antarctic continent. Meteorological and other scientific research is conducted at Mawson, which is the centre for coastal and inland survey expeditions.

A second Australian scientific research station was established on the coast of Princess Elizabeth Land on 13 January 1957 at latitude 68° 35' S. and longitude 77° 58' E. The station was named in honour of Captain John King Davis, second in command of two of Mawson's expeditions and master of several famous Antarctic ships. The station was temporarily closed on 25 January 1965 and reopened on 15 February 1969. On 4 February 1959 the Australian Government accepted from the United States Government custody of Wilkes Station, which was established by the United States on 16 January 1957 on Vincennes Bay at latitude 66° 15' S. and longitude 110° 32' E. The station was named in honour of Lieutenant Charles Wilkes who commanded the 1838-42 United States expedition to the area. The station was closed on 19 February 1969 when activities were transferred to Casey Station built about 1½ miles south of Wilkes. Casey Station, which was opened on 19 February 1969, was named in honour of Baron Casey, former Governor-General of Australia, in recognition of his long association with Australia's Antarctic effort.

On 1 December 1959 Australia signed the Antarctic Treaty with Argentina, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the U.S.S.R., the United Kingdom, and the United States of America, Poland, Czechoslovakia, Denmark, the Netherlands and Romania have subsequently acceded to the Treaty. The Treaty reserves the Antarctic area south of 60° S. latitude for peaceful purposes, provides for international co-operation in scientific investigation and research, and preserves, for the duration of the Treaty, the *status quo* with regard to territorial sovereignty, rights and claims. The Treaty entered into force on 23 June 1961. Since then the Antarctic Treaty powers have held seven consultative meetings under the Treaty, the first at Canberra in July 1961, the second at Buenos Aires in July 1962, the third at Brussels in June 1964, the fourth at Santiago in 1966, the fifth in Paris in 1968, the sixth in Tokyo 1970 and the seventh in Wellington in 1972.

## COCOS (KEELING) ISLANDS

### General description

The Cocos (Keeling) Islands, two separate atolls comprising some twenty-seven small coral islands with a total area of about  $5\frac{1}{2}$  square miles, are situated in the Indian Ocean in latitude 12° 05' S. and longitude 96° 53' E. They lie some 1,720 miles north-west of Perth and 2,290 miles almost due west of Darwin, while Johannesburg is some 3,800 miles further distant to the south-west and Colombo is 1,400 miles to the north-west of the group.

The main islands of the Territory are West Island, the largest, about six miles from north to south, on which are the aerodrome and most of the European community; Home Island, the headquarters of the Clunies-Ross Estate; Direction Island; South Island; and Horsburgh Island. North Keeling Island, which forms part of the Territory, lies about fifteen miles to the north of the groups and has no inhabitants.

Main settlements are on West Island and Home Island. The group of atolls is low-lying, flat and thickly covered by coconut palms, and surrounds a lagoon which has an anchorage in the northern part but which is extremely difficult for navigation.

The climate is equable and pleasant, usually being under the influence of the south-east trade winds for about three-quarters of the year. However, the winds vary at times, and meteorological reports from the Territory are particularly valuable for those engaged in forecasting for the eastern Indian Ocean. The temperature varies between 21°C and 32°C., and the average rainfall is about 2180 mm. There are occasional violent storms. The estimated population at 30 June 1972 was 637.

### History and administration

Summarised particulars of the discovery of the islands and their history up to 1946, when they became a dependency of the Colony of Singapore, are given in Year Book No. 51, page 140, and in earlier issues. On 23 November 1955 the Cocos Island ceased to form part of the Colony of Singapore and were placed under the authority of Australia. The transfer was effected by an Order in Council made by Her Majesty Queen Elizabeth the Second under the Imperial Act entitled the Cocos Islands Act 1955 and by the *Cocos (Keeling) Islands Act 1955* of the Australian Parliament whereby the islands were declared to be accepted by Australia as a Territory to be known as the Territory of Cocos (Keeling) Islands.

Responsibility for the administration of the Territory rests with the Minister for External Territories. The first Official Representative was appointed on 23 November 1955 to take charge of the local administration of the Territory. Under the *Official Representative Ordinance 1955-1961* of the Territory, the Official Representative is given such powers and functions in relation to the Territory as are delegated to him by the Minister under the *Cocos (Keeling) Islands Act 1955-1966* or are otherwise conferred on him under that Act or by or under any other law of the Territory. The laws of the Colony of Singapore which were in force in the islands immediately before the date of the transfer were, with certain exceptions, continued in force by the *Cocos (Keeling) Islands Act 1955-1966*. They may be amended or repealed by Ordinances made under the provisions of that Act which empower the Governor-General to make Ordinances for the peace, order and good government of the Territory.

### Transport and communication

There is an international airport at West Island under the control of the Commonwealth Department of Civil Aviation. A fortnightly air service is provided between Perth and the Cocos Islands by Ansett and T.A.A. alternately. Although there is no regular shipping service, vessels from Australia and Singapore call at intervals. A radio teletype link with Perth is maintained by the Administration. Local postal and telephone services exist, and a non-commercial broadcasting station operates.



## CHRISTMAS ISLAND

Christmas Island is an isolated peak situated in the Indian Ocean in latitude 10° 25' 22" S., longitude 105° 39' 59" E. It is approximately 224 miles south from Java Head at the south entrance to Sunda Strait, 815 miles from Singapore and 1,630 miles from Fremantle. Christmas Island covers an area of about fifty-two square miles. It consists of a central plateau of about 600 to 800 feet with several prominent rises up to 1,170 feet. The plateau descends to the sea in a series of steep slopes alternating with terraces, the last dropping in a cliff of 200 to 300 feet to a shore terrace, terminating in a sea cliff of 10 to 150 feet, which is continuous round the island except in a few places, the chief of which is Flying Fish Cove, where the principal settlement is located and which is also the only known anchorage.

The climate is pleasant, and the prevailing winds come from the south-east to east-south-east from May to December, but from then to April (the wet season) they occasionally shift round to between north and west. The average yearly rainfall is about 64 inches with a marked summer incidence. The porous nature of the ground prevents the formation of pools of water, but there are several good springs which maintain an adequate supply of fresh water for the small population and the installations. The mean average temperature is about 27°C., and does not vary greatly throughout the year.

The economy of the Territory is based almost entirely on the mining and extraction of phosphate. Because of the nature of the land there appears little prospect of establishing any other economic activity.

At 30 June 1972 the estimated population was 2,741 (1,825 males and 916 females).

### Education

The Christmas Island education system comprises a primary school and a secondary school following the Singapore curriculum, a primary school following an Australian curriculum and a technical training centre. The Singapore curriculum schools provide classes to Form 4 level and scholarships are available for students wishing to proceed to Singapore or Australia for education beyond that level.

At 30 June 1972, 712 children were enrolled at the primary and secondary schools following the Singapore curriculum. The combined staff establishment consisted of a headmaster, two senior teachers, 28 trained teachers and 2 assistant teachers. The Australian curriculum primary school had 67 pupils at 30 June 1972, with teachers seconded from the Western Australian Department of Education. There is also a Technical Training Centre, which opened in 1969.

### History and administration

Summarised particulars of the history of Christmas Island up to its administration by the United Kingdom as a separate Crown Colony from 1 January 1958, pending transfer to Australia, are given in Year Book No. 51, page 141, and in earlier issues. On 1 October 1958 the island was transferred to Australia by the *Christmas Island Act 1958*. Responsibility for the administration and government of the Territory rests with the Minister for External Territories, and day to day affairs on the island are administered by an Administrator under delegation from the Minister. The laws which were in force on the island at 30 September 1958 were continued as the laws of the Territory after its transfer to Australia. They may be amended or repealed by Ordinances or by laws made under Ordinances of the Territory.

### Phosphate deposits

The only commercial activity carried out is the mining of phosphate. The British Phosphate Commissioners act as managing agents for the Christmas Island Phosphate Commission. Phosphate is mined at several locations on the Island. During 1971-72, 767,350 tons of phosphate were exported to Australia and New Zealand. In addition 154,890 tons of phosphate dust were exported to South-East Asia and 2,822 tons went to Australia.

### Transport and communication

Transport to and from the island is maintained by vessels operated under charter by the Christmas Island Phosphate Commission. One vessel makes regular trips between Christmas Island and Singapore, and other vessels carry phosphate to Australian ports and New Zealand.

A post office is staffed and operated by the Administration. The British Phosphate Commissioners operate an internal telephone system which comprises five automatic exchanges and three small subscriber-attended exchanges. A radio station is used for messages via Perth and Singapore and for communication with ships at sea. A limited broadcasting station commenced operating during 1966-67.



**CORAL SEA ISLANDS**

The Coral Sea Islands were declared to be a Territory of the Commonwealth by the *Coral Sea Islands Act* 1969. The scattered reefs and islands, often little more than sandbanks, spread over a sea area of 400,000 square miles with only a few square miles of actual land area, between the Great Barrier Reef, latitude 12°S and longitude 157° 10' E. The Territory which is administered by the Minister for the Capital Territory, has no permanent inhabitants. There is a manned weather station on Willis Island, some 300 miles east of Cairns and a number of unmanned facilities are operated by the Commonwealth Government.



## CHAPTER 29

### MISCELLANEOUS

This chapter comprises statistics and other descriptive information not directly related to the subjects of the preceding chapters, or which it is convenient to assemble in single sections, arranged as follows: Value of Australian primary production; Indexes of farm production; Consumption of food-stuffs and beverages; Internal trade (retail and wholesale trade); Interstate trade; Statistical organisation in Australia; Statistical and other official publications of Australia; Metric conversion for Australia.

#### VALUE OF AUSTRALIAN PRIMARY PRODUCTION

The figures published in the following tables have been compiled by the Statisticians in the various States from the latest and best data available and are on a substantially uniform basis. However, marketing costs are not on a completely comparable basis between States and, in addition, accurate information is difficult to obtain for many items. In consequence, differences between States in the relationships of local to gross value should be treated with some reserve.

##### Explanation of terms used

The following is a brief explanation of the terms used.

- (a) *Gross value of production* is the value placed on recorded production at the wholesale price realised at the principal markets. In general, the 'principal markets' are the metropolitan markets in each State. In cases where primary products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets.
- (b) *Local value* (i.e. gross production valued at the place of production) is ascertained by deducting marketing costs from the gross value. Marketing costs include freight, cost of containers, commission, and other charges incidental thereto.
- (c) *Net value of production* represents local value less value of materials used in the process of production. Materials used in the process of production include seed, power, power kerosene, petrol and other oils, fodder consumed by farm stock, manures, dips, sprays, and other costs. No deductions have been made for depreciation or certain maintenance costs, as particulars are not available for all States. The net value of production is the only satisfactory measure to use when comparing or combining the value of primary industries with those of other industries.

For the years shown in the following tables, no allowance for power, power kerosene, petrol, and other oils has been made in New South Wales. Costs of materials used in the process of production in respect of bee-farming, hunting, forestry, and fishing are not available for all States (except for fishing in New South Wales and Western Australia commencing in 1971-72); local values have been used for these industries. Because of revisions, some figures may differ from corresponding figures in earlier chapters of this Year Book.



## Value of primary production, Australia

**GROSS, LOCAL AND NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES (EXCLUDING MINING): AUSTRALIA 1971-72**  
(\$'000)

<i>Industry</i>	<i>Gross production valued at principal markets</i>	<i>Local value—gross production valued at place of production</i>	<i>Net value of production (without deduction of depreciation or maintenance)</i>
Crops . . . . .	1,606,815	1,352,074	1,157,426
Pastoral . . . . .	1,564,456	1,417,514	1,210,349
Dairying . . . . .	607,323	568,271	465,701
Poultry . . . . .	200,715	174,377	79,672
Bee-farming . . . . .	6,456	6,042	(a)6,042
<i>Total, agriculture . . . . .</i>	<i>3,985,765</i>	<i>3,518,278</i>	<i>2,919,190</i>
Forestry . . . . .	151,699	139,332	(a)139,332
Fishing . . . . .	91,981	85,648	(b)83,403
Hunting . . . . .	10,185	9,132	(a)9,132
<i>Total, forestry, fishing and hunting . . . . .</i>	<i>253,865</i>	<i>234,111</i>	<i>231,866</i>
<i>Total, all primary (excluding mining) . . . . .</i>	<i>4,239,630</i>	<i>3,752,389</i>	<i>3,151,056</i>

(a) Local value. (b) Local value, except for New South Wales and Western Australia.

## Net value of primary production

**NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES (EXCLUDING MINING) STATES AND TERRITORIES, 1971-72**  
(\$'000)

<i>Industry</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Crops . . . . .	286,255	225,408	320,164	158,779	144,670	20,302	1,500	348	1,157,426
Pastoral . . . . .	376,606	292,638	213,562	123,412	156,314	26,601	19,791	1,425	1,210,349
Dairying . . . . .	121,700	211,444	63,243	32,163	9,924	26,772	175	280	465,701
Poultry . . . . .	37,905	21,866	6,124	3,540	6,736	2,735	582	184	79,672
Bee-farming(b) . . . . .	2,615	774	538	1,266	692	140	..	17	6,042
<i>Total, agriculture . . . . .</i>	<i>825,081</i>	<i>752,130</i>	<i>603,631</i>	<i>319,160</i>	<i>318,336</i>	<i>76,550</i>	<i>22,048</i>	<i>2,254</i>	<i>2,919,190</i>
Forestry(b) . . . . .	40,781	39,304	15,147	11,905	13,288	18,193	47	667	139,332
Fishing(c) . . . . .	15,577	8,855	10,762	10,398	29,089	5,929	2,793	..	83,403
Hunting(b) . . . . .	4,115	2,269	1,320	518	640	240	30	..	9,132
<i>Total, forestry, fishing and hunting . . . . .</i>	<i>60,473</i>	<i>50,427</i>	<i>27,229</i>	<i>22,821</i>	<i>43,017</i>	<i>24,362</i>	<i>2,870</i>	<i>667</i>	<i>231,866</i>
<i>Total, all primary (excluding mining)</i>	<i>885,554</i>	<i>802,557</i>	<i>630,860</i>	<i>341,981</i>	<i>361,353</i>	<i>100,912</i>	<i>24,918</i>	<i>2,921</i>	<i>3,151,056</i>

(a) See text on page 1021. (b) Local value. (c) Local value, except for New South Wales and Western Australia.

**NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES (EXCLUDING MINING) PER  
HEAD OF POPULATION, STATES, 1971-72**

(\$)

<i>Industry</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(b)</i>
Crops . . . . .	61.60	63.77	172.97	134.14	138.23	51.74	89.75
Pastoral . . . . .	81.05	82.79	115.38	104.26	149.35	67.79	93.85
Dairying . . . . .	26.19	59.82	34.17	27.17	9.48	68.23	36.11
Poultry . . . . .	8.16	6.19	3.31	2.99	6.44	6.97	6.18
Bee-farming(c) . . . . .	0.56	0.22	0.29	1.07	0.66	0.36	0.47
<i>Total, agriculture . . . . .</i>	<i>177.56</i>	<i>212.79</i>	<i>326.11</i>	<i>269.63</i>	<i>304.16</i>	<i>195.08</i>	<i>226.36</i>
Forestry(c) . . . . .	8.78	11.12	8.18	10.06	12.70	46.36	10.80
Fishing(d) . . . . .	3.35	2.51	5.81	8.78	27.79	15.11	6.47
Hunting(c) . . . . .	0.89	0.64	0.71	0.44	0.61	0.61	0.71
<i>Total, forestry, fish- ing and hunting . . . . .</i>	<i>13.01</i>	<i>14.27</i>	<i>14.71</i>	<i>19.28</i>	<i>41.10</i>	<i>62.08</i>	<i>17.98</i>
<b>Total, all primary (excluding mining)</b>	<b>190.57</b>	<b>227.06</b>	<b>340.82</b>	<b>288.91</b>	<b>345.26</b>	<b>257.17</b>	<b>244.34</b>

(a) See text on page 1021. (b) Includes Northern Territory and Australian Capital Territory. (c) Local value.  
(d) Local value, except for New South Wales and Western Australia.

**NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES (EXCLUDING MINING)  
AUSTRALIA, 1967-68 TO 1971-72**

(\$'000)

<i>Industry</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Crops . . . . .	899,425	1,208,905	1,010,351	1,071,170	1,157,426
Pastoral . . . . .	1,044,436	1,194,994	1,204,444	1,001,137	1,210,349
Dairying . . . . .	371,306	381,152	419,495	438,473	465,701
Poultry . . . . .	61,245	68,431	81,444	83,297	79,672
Bee-farming(b) . . . . .	3,806	2,589	4,398	4,179	6,042
<i>Total, agriculture . . . . .</i>	<i>2,380,216</i>	<i>2,856,073</i>	<i>2,720,131</i>	<i>2,598,259</i>	<i>2,919,190</i>
Forestry(b) . . . . .	109,759	110,344	117,797	128,960	139,332
Fishing(c) . . . . .	54,003	58,663	58,468	72,596	83,403
Hunting(b) . . . . .	10,547	10,564	11,232	9,048	9,132
<i>Total, forestry, fishing and hunting . . . . .</i>	<i>174,307</i>	<i>179,571</i>	<i>187,497</i>	<i>210,605</i>	<i>231,866</i>
<b>Total, all primary (excluding mining) . . . . .</b>	<b>2,554,532</b>	<b>3,035,644</b>	<b>2,907,629</b>	<b>2,808,860</b>	<b>3,151,056</b>

(a) See text on page 1021. (b) Local value. (c) Local value, except for New South Wales and Western Australia for 1971-72.

**INDEXES OF FARM PRODUCTION**

In the first two tables in this section indexes of price and quantum (i.e. value at constant prices) of production are given for the following industrial groups: Crops, Pastoral, Dairying, Poultry and Bee-farming, and All farming combined. Separate indexes are shown for wheat, wool and milk. In the third table indexes of quantum (i.e. value at constant prices) of production, exports and consumption of farm products for food use are shown.

**Farm production price indexes**

The farm production price indexes shown in the following table relate to average 'prices' of crops, pastoral, dairying, poultry and bee-farming products realised at the principal markets of Australia. The 'price' data used are average unit values for the total quantities of the relevant commodities produced or marketed in each year, and the index numbers therefore measure both the effects of changes in prices (as such) and of variations in the quality, type, usage, etc. of products marketed. The index numbers for any year relate to the average values of products produced or marketed in that year irrespective of the periods in which payment is received by producers.

The indexes have been calculated by the fixed-base weighted aggregative method. 'Prices' for each commodity in any year are obtained by dividing gross value of production by the quantity produced in that year. In the original published series of Production Price Index Numbers the average quantities of the relevant commodities *produced* in the period 1923-24 to 1927-28 were used as fixed weights. This series, re-computed to the base: average 1936-37 to 1938-39 = 100, was published in earlier issues of the Year Book (*see* No. 43, page 1050). For 1936-37 and later years the original series was replaced in December 1952 by a revised series in which average quantities of each product *marketed* during the period 1946-47 to 1950-51 were used as fixed weights. In the revised series the regimen was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were also incorporated in the revised indexes, the principal of which was the omission from the weights used for the All farming index of quantities of crops marketed for livestock feeding in Australia.

**FARM PRODUCTION: INDEXES OF PRICES AT PRINCIPAL MARKETS, AUSTRALIA  
1956-57 TO 1970-71**

(Base: Average of 3 years ended June 1939 = 100)

Year	Crops		Pastoral		Dairying, poultry and bee-farming		All farming	
	Wheat	Total	Wool (shorn and dead)	Total	All milk	Total	Products other than wool	Total
1956-57	347	336	607	536	365	386	374	432
1957-58	339	336	473	435	375	382	359	388
1958-59	337	322	370	396	372	386	369	369
1959-60	350	329	440	464	383	402	391	403
1960-61	355	349	397	443	384	402	403	401
1961-62	380	348	412	421	373	373	376	385
1962-63	366	334	449	450	380	388	378	396
1963-64	356	351	531	511	382	402	398	431
1964-65	351	351	437	460	403	423	408	415
1965-66	372	354	458	501	395	422	423	431
1966-67	366	350	433	496	388	418	425	427
1967-68	397	371	382	457	380	413	429	417
1968-69	337	334	408	488	391	424	424	420
1969-70	359	348	343	451	393	427	434	411
1970-71	354	358	268	395	420	439	438	396

**Indexes of quantum (i.e. value at constant prices) of farm production**

The indexes shown in the following table relate to gross output of farm products valued at constant prices. They have been calculated by revaluing quantities of each farm product included in the indexes at the average unit gross value of each product for the base years.

In the original published series the period 1923-24 to 1927-28 was adopted as the base for revaluing each farm product. This series, re-computed to the base: average 1936-37 to 1938-39 = 100, was published in earlier issues of the Year Book (*see* No. 43, page 1051). For 1936-37 and later years the original series was replaced in December 1952 by a revised series in which average unit values for the period 1936-37 to 1938-39 were used. The regimen used for the revised series was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were incorporated in the revised indexes, the principal of which was the omission, in calculating the All farming index, of quantities of crops fed to livestock in Australia.



**INDEXES OF QUANTUM<sup>(a)</sup> OF FARM PRODUCTION: AUSTRALIA  
1956-57 TO 1970-71**

*(Base: Average of 3 years ended June 1939 = 100)*

Year	Crops		Pastoral		Dairying, poultry and bee-farming		All farming	
	Wheat	Total	Wool (shorn and dead)	Total	All milk	Total	Products other than wool	Total
1956-57	82	120	164	148	119	117	121	131
1957-58	59	109	148	142	111	114	116	124
1958-59	131	165	164	159	120	119	145	149
1959-60	121	140	172	163	123	123	136	144
1960-61	166	177	165	152	116	120	148	152
1961-62	150	163	174	160	125	128	150	155
1962-63	186	191	170	163	129	129	165	166
1963-64	199	196	183	172	131	131	171	174
1964-65	224	218	183	172	132	136	180	181
1965-66	158	184	169	163	133	138	165	166
1966-67	283	265	180	167	140	145	205	199
1967-68	168	189	180	174	132	141	173	175
1968-69	330	292	199	186	133	143	219	215
1969-70	235	242	208	199	146	155	206	207
1970-71	176	239	198	201	140	154	203	202

<sup>(a)</sup> Indexes of value at constant prices, i.e. quantities revalued at average unit values of the base years (see text preceding table).

**Farm products for food use: indexes of quantum (i.e. value at constant prices)  
of production, exports and consumption**

The indexes shown in the following table have been calculated by revaluing quantities of each farm product included in the indexes at the average unit gross value of each product for the years 1936-37 to 1938-39. The items included comprise products in the form in which they are sold from farms in all cases except livestock sold for slaughter for meat, which are included in terms of dressed carcass weight of meat. Quantity data relating to exports include exports of processed food in terms of farm product equivalent. The indexes of production relate basically to gross output of farm products for food use, including crops exported for stock-feeding overseas.

**FARM PRODUCTS FOR FOOD USE: INDEXES OF QUANTUM<sup>(a)</sup> OF  
PRODUCTION, EXPORTS AND CONSUMPTION  
AUSTRALIA, 1956-57 TO 1970-71**

*(Base: average of 3 years ended June 1939 = 100)*

Year	Production		Exports		Consumption in Australia	
	Total	Per head of total population	Total	Per head of total population	Total	Per head of total population
1956-57	123	88	118	85	136	98
1957-58	115	81	90	64	139	98
1958-59	146	101	137	94	142	98
1959-60	138	93	132	89	145	98
1960-61	148	98	170	112	143	95
1961-62	154	99	161	104	150	97
1962-63	168	107	187	119	154	98
1963-64	175	109	207	129	159	99
1964-65	185	112	219	134	163	99
1965-66	167	100	181	108	162	97
1966-67	197	115	243	143	167	98
1967-68	178	102	194	112	171	98
1968-69	192	108	216	122	177	100
1969-70	208	115	247	136	179	99
1970-71	203	110	282	153	188	102

<sup>(a)</sup> Indexes of value at constant prices, i.e. quantities revalued at average unit values for the base years (see text preceding table).

## CONSUMPTION OF FOODSTUFFS AND BEVERAGES

### Quantities consumed

The estimates of total consumption and consumption per head of population in Australia in the two tables which follow have been compiled by deducting net exports from the sum of production and imports and allowing for recorded movements in stocks of the respective commodities. While the estimates may be generally accepted as being reasonably accurate, there are some deficiencies to which attention should be directed. These relate chiefly to the quantities of fish, rabbits and hares and the quantities of certain oils and fats entering consumption. In addition, little information is available on the quantities of vegetables, fruit, eggs, etc. which householders produce for their own requirements and the extent of wastage occurring in the marketing of foodstuffs. In all these cases careful estimates have been compiled from the best available data, and the quantities shown as entering consumption in Australia have been adjusted to allow for these circumstances. The absence of particulars for stocks of certain commodities has resulted in some inaccuracies in the estimates of annual consumption. Consumption of foodstuffs is measured in general at 'producer' level. As a result, no allowance is made for wastage before the foodstuffs are consumed. In recent years wastage of foodstuffs has possibly been less than previously because of more efficient distribution and storage methods. Furthermore, it is likely that the quantities of foodstuffs shown in the following pages as available for consumption have been supplemented by production by householders for their own requirements. In most cases broad estimates of non-commercial (householders') production have been made. Except in a few special cases, no adjustment has been made for changes in stocks held by wholesalers and retailers. Where no allowance is made it is considered unlikely that these stocks would make any appreciable difference to consumption estimates. It is felt that the foregoing deficiencies do not seriously impair the accuracy of the estimates compiled.

The estimates of consumption per head of population shown in the second of the following tables have been derived by dividing the total apparent consumption of each commodity or commodity group in a given year by the mean population of Australia in the same period.

More detailed information on the consumption of foodstuffs and beverages is contained in the statistical bulletin: *Apparent Consumption of Foodstuffs and Nutrients* (10.10), issued by this Bureau.

The following tables show the average annual consumption during the three-year periods ended 1938-39, 1948-49 and 1958-59, together with the data for each of the years 1969-70, 1970-71 and 1971-72. Because of revisions, figures for some items in the following tables may differ from corresponding figures in earlier chapters of this Year Book.

### ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA, 1936-37 TO 1971-72

Commodity	Average three years ended—					
	1938-39	1948-49	1958-59	1969-70	1970-71	1971-72 <sup>p</sup>
<b>Grain products—</b>						
Flour (including wheatmeal for baking and sharps) . . . . .	'000 tons					
Breakfast foods . . . . .	574.0	689.7	789.1	944.1	991.3	982.2
Rice (milled) . . . . .	32.5	45.8	58.8	75.3	74.3	78.2
Tapioca, sago, etc. . . . .	12.2	3.0	n.a.	30.2	32.6	33.1
Pearl barley . . . . .	3.7	2.3	1.4	0.8	0.8	0.8
	3.0	1.7	2.0	0.3	1.4	1.5
<i>Total grain products</i> . . . . .	(a)629.7	(a)747.4	n.a.	1,050.6	1,100.4	1,095.9
<b>Sugar and syrups—</b>						
Refined sugar—						
As sugar . . . . .	'000 tons					
In manufactured products . . . . .	216.5	234.6	259.0	250.7	248.9	257.8
Honey, glucose and syrups (sugar content) . . . . .	110.1	174.2	226.1	358.4	377.3	377.6
	17.3	19.1	22.8	46.3		
<i>Total sugar and syrups (sugar content)</i> . . . . .	343.9	427.9	507.9	665.4		
<b>Pulse and nuts—</b>						
Dried pulse . . . . .	4.5	7.4	11.1	13.2		
Peanuts (weight without shell) . . . . .	2.8	8.7	7.2	13.8		
Edible tree nuts (weight without shell) . . . . .	2.6	4.4	6.7	10.4	33.7	37.2
Cocoa (raw beans) . . . . .	6.3	11.6	12.1	17.9		
<i>Total pulse and nuts</i> . . . . .	16.2	32.1	37.1	55.2		

For footnotes see next page.

## ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA, 1936-37 TO 1971-72—continued

Commodity	Average three years ended—					
	1938-39	1948-49	1958-59	1969-70	1970-71	1971-72p
<b>Vegetables(b)—</b>						
Leafy and green vegetables . . . '000 tons	n.a.	154.0	172.1	261.8	256.1	275.7
Tomatoes . . . . .	(c)48.0	86.3	124.4	152.5	203.2	190.2
Root and bulb vegetables . . . . .	n.a.	143.7	152.8	208.9	216.9	223.9
Potatoes—						
White . . . . .	318.5	424.3	495.4	679.3	675.9	746.9
Sweet . . . . .	7.4	5.3	6.1	7.8	7.9	8.0
Other vegetables . . . . .	n.a.	162.8	178.4	233.1	219.6	224.5
<b>Total vegetables</b> . . . . .	<b>n.a.</b>	<b>976.4</b>	<b>1,129.2</b>	<b>1,543.4</b>	<b>1,579.7</b>	<b>1,669.2</b>
<b>Fruit—</b>						
Citrus fruit(b) . . . . .	97.8	127.2	153.8	296.4	377.2	344.4
Other fresh fruit . . . . .	288.2	297.5	341.4	441.8	568.5	542.9
Jams . . . . .	35.1	42.5	37.5	37.4	36.9	36.8
Dried fruit . . . . .	24.8	30.0	26.4	27.8	30.3	37.2
Canned fruit . . . . .	31.9	37.3	59.4	121.4	128.1	108.2
<b>Total fruit (fresh fruit equivalent)</b> . . . . .	<b>532.3</b>	<b>607.9</b>	<b>691.4</b>	<b>1,025.8</b>	<b>1,259.1</b>	<b>1,202.1</b>
<b>Meat—</b>						
Beef and veal (carcass weight) . . . . .	430.3	372.7	538.4	473.5	494.5	500.1
Mutton . . . . .	184.1	154.0	221.6	207.3	245.7	249.5
Lamb . . . . .	46.0	86.1	127.7	252.2	287.8	296.4
Pigmeat . . . . .	26.2	24.3	43.6	92.1	86.2	98.1
Offal . . . . .	25.7	30.3	49.7	63.5	63.9	73.8
Canned meat (canned weight) . . . . .	6.5	9.0	17.9	28.2	30.8	28.7
Bacon and ham (cured carcass weight) . . . . .	31.5	39.9	30.5	46.2	57.8	55.0
<b>Total meat (in terms of carcass equivalent weight)</b> . . . . .	<b>769.9</b>	<b>736.9</b>	<b>1,054.1</b>	<b>1,187.6</b>	<b>1,297.8</b>	<b>1,332.6</b>
Poultry (dressed weight) . . . . .	n.a.	n.a.	n.a.	128.6	141.4	159.2
<b>Eggs and egg products (in terms of eggs in shell)—</b>						
Eggs in shell . . . . .	78.7	86.5	92.1	(d)142.4	(d)145.2	(d)147.9
Egg pulp . . . . .	2.9	8.6	5.7	(d)9.1	(d)9.0	(d)7.8
Egg powder . . . . .	..	..	0.2	(d)0.8	(d)0.8	(d)0.8
<b>Total eggs and egg products</b> . { mil. doz.	<b>81.6</b>	<b>95.1</b>	<b>98.0</b>	<b>(d)152.2</b>	<b>(d)155.0</b>	<b>(d)156.5</b>
	<b>193.3</b>	<b>162.3</b>	<b>167.3</b>	<b>228.3</b>	<b>231.5</b>	<b>233.8</b>
<b>Fish (weight)—</b>						
Fresh—						
Australian origin . . . . . '000 tons			13.8	21.7	20.5	20.5
Imported . . . . .	19.7	19.4	9.0	19.8	26.3	19.8
Cured (including smoked and salted) . . . . .			3.8	4.7	5.7	4.2
Crustaceans and molluscs . . . . .	2.1	2.1	3.8	8.8	11.9	12.1
Canned—Australian origin . . . . .			3.3	7.0	5.8	6.0
Imported . . . . .	12.4	10.5	7.4	11.1	10.8	11.5
<b>Total fish (edible weight)</b> . . . . .	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>73.1</b>	<b>81.0</b>	<b>74.0</b>
<b>Milk and milk products—</b>						
Fluid whole milk . . . . . mil. gal	161	233	276	351	359	361
Fresh cream . . . . . '000 tons	19.7	5.1	8.7	11.1	11.3	11.5
Condensed, concentrated and evaporated milk—						
Full cream—						
Sweetened . . . . .	13.2	11.9	11.3	12.5	11.4	11.8
Unsweetened . . . . .		13.6	27.6	(e)42.5	(e)58.6	(e)65.4
Skim . . . . .	n.a.	n.a.	5.6	8.4	14.1	11.0
Powdered milk—						
Full cream . . . . .	8.1	11.0	11.0	9.5	9.3	13.7
Skim . . . . .	..	1.9	10.7	(f)54.6	(f)50.5	(f)55.6
Infants' and invalids' foods . . . . .	3.0	4.3	9.4	14.3	11.7	14.4
Cheese . . . . .	13.4	18.8	25.0	44.9	50.9	52.9
<b>Total milk and milk products (in terms of milk solids)</b> . . . . .	<b>120.5</b>	<b>167.4</b>	<b>212.4</b>	<b>315.3</b>	<b>325.5</b>	<b>338.9</b>
<b>Fats and oils—</b>						
Butter . . . . .	101.4	84.7	118.4	113.9	115.2	110.3
Margarine—						
Table . . . . .	2.8	3.0	n.a.	16.2	15.9	16.6
Other . . . . .	12.2	18.7	21.2	46.7	47.4	49.9
Vegetable oils and other fats . . . . .	19.6	18.0	19.6	25.0	25.5	25.9
<b>Total fats and oils (fat content)</b> . . . . .	<b>115.5</b>	<b>105.5</b>	<b>n.a.</b>	<b>173.2</b>	<b>175.0</b>	<b>174.1</b>
<b>Beverages—</b>						
Tea . . . . .	21.1	22.1	26.1	27.1	27.2	26.9
Coffee(g) . . . . .	2.0	3.4	5.9	15.4	16.2	18.6
Beer . . . . . mil. gal	80.1	129.5	221.0	337.1	352.2	361.0
Wine . . . . .	4.2	9.8	11.1	24.4	24.4	25.6
Spirits . . . . . mil. pf gal	1.5	2.4	2.8	4.9	5.1	5.5

(a) Includes an allowance for edible starch (cornflour).  
 (c) Probably understated owing to lack of complete data.  
 (f) Includes buttermilk and mixed skim and buttermilk.  
 or ground pure coffee.

(b) Includes fresh equivalent of manufactured products.  
 (d) Not comparable with data prior to 1960-61, in which year the average weight of an egg was altered in calculations from 1.75 oz to 2 oz.  
 (e) Includes ice cream mixes.  
 (g) Coffee and coffee products in terms of processed whole



**ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR  
CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA, 1936-37 TO 1971-72**

Commodity	Average three years ended—						
	1938-39	1948-49	1958-59	1969-70	1970-71	1971-72p	
<b>Grain products—</b>							
Flour (including wheatmeal for baking and sharps)	lb	187.1	201.9	181.5	169.9	175.8	171.0
Breakfast foods	"	10.6	13.4	13.5	13.6	13.1	13.6
Rice (milled)	"	4.0	0.9	n.a.	5.4	5.8	5.8
Tapioca, sago, etc.	"	1.2	0.7	0.3	0.1	0.1	0.1
Pearl barley	"	1.0	0.5	0.4	..	0.3	0.3
Total grain products	"	(a)205.3	(a)218.8	n.a.	189.1	195.1	190.7
<b>Sugar and syrups—</b>							
Refined sugar—							
As sugar	"	70.6	68.7	59.6	45.1	44.1	44.9
In manufactured products	"	35.9	51.0	52.0	64.5	66.9	65.7
Honey, glucose and syrups (sugar content)	"	5.5	5.6	5.2	8.4	n.a.	n.a.
Total sugar and syrups (sugar content)	"	112.0	125.3	116.8	118.4	n.a.	n.a.
<b>Pulse and nuts—</b>							
Dried pulse	"	1.5	2.1	2.6	2.4	n.a.	n.a.
Peanuts (weight without shell)	"	0.9	2.5	1.7	2.5	n.a.	n.a.
Edible tree nuts (weight without shell)	"	0.8	1.3	1.5	1.9	2.1	2.2
Cocoa (raw beans)	"	2.1	3.4	2.8	3.2	n.a.	n.a.
Total pulse and nuts	"	5.3	9.3	8.6	10.0	n.a.	n.a.
<b>Vegetables(b)—</b>							
Leafy and green vegetables	"	n.a.	45.1	39.5	47.1	45.4	47.9
Tomatoes	"	(c)15.7	25.3	28.6	27.6	36.0	33.0
Root and bulb vegetables	"	n.a.	42.1	35.1	37.6	38.2	38.9
Potatoes—							
White	"	103.8	124.2	113.9	122.9	119.8	129.7
Sweet	"	2.4	1.5	1.4	1.4	1.4	1.4
Other vegetables	"	n.a.	47.7	41.0	42.2	38.9	39.0
Total vegetables	"	n.a.	285.9	259.5	279.2	280.1	289.9
<b>Fruit—</b>							
Citrus fruit(b)	"	31.9	37.2	35.4	53.6	66.9	60.0
Other fresh fruit	"	94.0	87.1	78.4	79.8	100.8	94.5
Jams	"	11.4	12.4	8.6	6.8	6.5	6.4
Dried fruit	"	8.1	8.7	6.0	5.0	5.3	6.5
Canned fruit	"	10.4	11.0	13.6	21.9	22.7	18.8
Total fruit (fresh fruit equivalent)	"	173.6	178.0	157.6	185.2	223.2	209.2
<b>Meat—</b>							
Beef and veal (carcass weight)	"	140.3	109.1	123.8	85.2	87.5	87.0
Mutton	"	60.0	45.1	51.0	37.3	43.5	43.4
Lamb	"	15.0	25.2	29.3	45.4	50.9	51.6
Pigmeat	"	8.5	7.1	10.1	16.7	15.2	17.1
Offal	"	8.4	8.9	11.4	11.4	11.3	12.9
Canned meat (canned weight)	"	2.1	2.6	4.1	5.1	5.4	5.0
Bacon and ham (cured carcass weight)	"	10.2	11.7	7.1	8.3	10.2	9.6
Total meat (in terms of carcass equivalent weight)	"	250.9	215.7	242.4	213.8	229.7	231.9
Poultry (dressed weight)	"	n.a.	n.a.	n.a.	23.2	25.0	27.7
<b>Eggs and egg products (in terms of eggs in shell)—</b>							
Eggs in shell	"	25.7	25.4	21.2	(d)25.7	(d)25.7	(d)25.7
Egg pulp	"	0.9	2.5	1.3	(d)1.6	(d)1.6	(d)1.3
Egg powder	"	..	..	..	(d)0.1	(d)0.1	(d)0.1
Total eggs and egg products	No. {	26.6 243	27.9 255	22.5 206	(d)27.5 220	(d)27.5 220	(d)27.2 218
<b>Fish (edible weight)—</b>							
Fresh—							
Australian origin	lb	6.4	5.7	3.2	3.9	3.6	3.6
Imported	"			2.1	3.6	4.7	3.4
Cured (including smoked and salted)	"			0.9	0.9	1.0	0.7
Crustaceans and molluscs	"	0.7	0.6	0.9	1.6	2.1	2.1
Canned—							
Australian origin	"	4.1	3.0	0.8	1.3	1.0	1.0
Imported	"			1.7	2.0	1.9	2.0
Total fish (edible weight)	"	n.a.	n.a.	n.a.	13.1	14.4	12.8

For footnotes see next page.

**ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR  
CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA  
1936-37 TO 1971-72—continued**

Commodity		Average three years ended—			1969-70	1970-71	1971-72p
		1938-39	1948-49	1958-59			
Milk and milk products—							
Fluid whole milk . . . . .	gallons	23.4	30.5	28.0	28.2	28.4	28.1
Fresh cream . . . . .	lb	6.1	1.5	2.0	2.0	2.0	2.0
Condensed, concentrated and evaporated milk—							
Full cream—							
Sweetened . . . . .	"	4.3	3.5	2.6	2.3	2.0	2.0
Unsweetened . . . . .	"	4.0	4.0	6.4	(e)7.7	(e)10.4	(e)11.4
Skim . . . . .	"	n.a.	n.a.	1.3	1.5	2.5	1.9
Powdered milk—							
Full cream . . . . .	"	2.6	3.2	2.5	1.7	1.7	2.4
Skim . . . . .	"	0.6	0.6	2.5	(f)9.9	(f)8.9	(f)9.7
Infants' and invalids' foods . . . . .	"	1.0	1.3	2.2	2.6	2.1	2.5
Cheese . . . . .	"	4.4	5.5	5.7	8.1	9.0	9.2
Total milk and milk products (in terms of milk solids) . . . . .	"	39.3	49.1	48.7	57.0	57.7	58.9
Fats and oils—							
Butter . . . . .	"	32.9	24.8	27.2	20.5	20.4	19.2
Margarine—							
Table . . . . .	"	0.9	0.9	n.a.	2.9	2.8	2.9
Other . . . . .	"	4.0	5.2	4.9	8.4	8.4	8.7
Vegetable oils and other fats . . . . .	"	6.4	5.3	4.5	4.5	4.5	4.5
Total fats and oils (fat content) . . . . .	"	37.6	30.9	n.a.	31.2	30.8	30.3
Beverages—							
Tea . . . . .	"	6.9	6.5	6.0	4.9	4.8	4.7
Coffee(g) . . . . .	"	0.6	1.0	1.3	2.8	2.9	3.2
Beer . . . . .	gallons	11.7	16.9	22.7	27.1	27.9	28.0
Wine . . . . .	"	0.6	1.3	1.1	2.0	1.9	2.0
Spirits . . . . .	pf gal	0.2	0.3	0.3	0.4	0.4	0.4

(a) Includes an allowance for edible starch (cornflour). (b) Includes fresh equivalent of manufactured products. (c) Probably understated owing to lack of complete data. (d) Not comparable with data prior to 1960-61, in which year the average weight of an egg was altered in calculations from 1.75 oz to 2 oz. (e) Includes ice cream mixes. (f) Includes buttermilk and mixed skim and buttermilk. (g) Coffee and coffee products in terms of processed whole or ground pure coffee.

### Level of nutrient intake

The next table shows details of the estimated supplies of nutrients available for consumption in Australia during the years 1969-70 to 1971-72 in comparison with the annual averages for the three-year periods ended 1938-39, 1948-49 and 1958-59. The table has been compiled by the Nutrition Section of the Commonwealth Department of Health and is based on the estimates of the quantity of foodstuffs available for consumption per head of population shown in the preceding table.

**ESTIMATED SUPPLY OF NUTRIENTS AVAILABLE FOR CONSUMPTION  
AUSTRALIA, 1936-37 TO 1971-72  
(Per head per day)**

Nutrient		Average three years ended—			1969-70 (a)	1970-71 (a)	1971-72p (a)
		1938-39	1948-49	1958-59			
Protein—							
Animal . . . . .	g	58.7	57.4	59.6	64.7	64.7	68.3
Vegetable . . . . .	"	30.9	35.3	32.3	35.6	35.9	32.7
Total . . . . .	"	89.6	92.7	91.9	100.3	100.6	101.0
Fat . . . . .	"	133.5	121.7	131.7	122.6	121.9	121.6
Carbohydrate . . . . .	"	377.4	424.8	416.7	412.7	412.9	409.6
Calcium . . . . .	mg	642	785	817	980	986	1,008
Iron . . . . .	"	15.4	15.1	14.0	14.8	15.1	14.5
Vitamin A . . . . .	i.u.	4,905	4,630	4,568	(b)1,548	(b)1,555	(b)1,644
Ascorbic acid . . . . .	mg	86	96	89	92	102	98
Thiamine . . . . .	"	1.4	1.5	1.3	1.6	1.7	1.6
Riboflavin . . . . .	"	1.7	1.9	1.8	2.9	2.8	2.8
Niacin . . . . .	"	18.7	17.6	18.6	20.1	21.7	20.6
Energy value . . . . .	kilocalories	3,117	3,245	3,297	3,264	3,352	3,295

(a) Not comparable with previous years. Figures are based on conversion factors calculated from the revised and enlarged edition of 'Tables of Composition of Australian Foods'. (b) Micrograms.

NOTE. One international unit of vitamin A activity is equivalent to 0.3 micrograms of retinol.

## INTERNAL TRADE

Extensive statistics of retail trade have been collected and published over many years. The first full census of wholesale trade, however, was conducted as part of the integrated economic censuses of 1968-69, outlined briefly below. For a detailed description of these censuses, reference should be made to Year Book No. 56, 1970, Chapter 31.

**Economic Censuses, 1968-69**

For the year ended 30 June 1969 the censuses of Wholesale Trade, and of Retail Trade and Selected Services, were conducted for the first time on an integrated basis with censuses of Mining, Manufacturing, and Electricity and Gas Production and Distribution. The integration of these economic censuses was designed to increase substantially the usefulness and comparability of the kinds of statistics already being collected and published by the Bureau and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates.

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in scope, and in such a way that aggregates for certain important economic data such as value added, employment, salaries and wages, fixed capital expenditure and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment) in general now covers all the operations carried on under the one ownership at a single physical location. The retail establishment is thus one predominantly engaged in retailing, and the wholesale establishment one predominantly engaged in wholesaling, but the data supplied for them now cover, with a few exceptions, all activities at the location.

Establishment statistics, other than the number of establishments, also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business (enterprise) which owns and operates the establishment. These units, such as head offices, storage premises, transport depots and motor vehicle repair and maintenance workshops, were formerly excluded from censuses.

The summary tables shown in this section include final figures from the 1968-69 censuses of wholesale and retail trade. Further and more detailed statistics are included in separate bulletins published by the Central and State offices of this Bureau.

**Wholesale trade.** The term wholesale trade is used in the wholesale census in the broad sense to include the resale (by agents or principals) of new or used goods to retailers or other wholesalers or to institutional (including government), professional or other business users (including farmers and builders). The more important types of business engaged in wholesale trade are wholesale merchants, who take title to the goods they sell; manufacturers' sales branches; commission agents, including import and export agents and purchasing agents; petroleum products distributors; and co-operative and marketing boards engaged in marketing farm products.

Each establishment in the integrated censuses is identified in terms of a particular location and all sales, employment, etc., are recorded for that location, regardless of the size of the sales territory covered, i.e. the location of customers. For this reason, all of the sales, etc., of the wholesale establishments located in the State of Victoria, for example, are credited to Victoria even though the sales territories may extend over several States.

In the tables which follow, wholesale establishments have been classified by type of operation according to the nature of the functions performed and by industry according to the Australian Standard Industrial Classification. The basis of the broad type of operation classification is the description of 'type of operation' reported by businesses for each individual wholesale establishment.

**WHOLESALE ESTABLISHMENTS: SUMMARY OF OPERATIONS  
BY BROAD TYPE OF OPERATION: AUSTRALIA, 1968-69**

Broad type of operation	Number of establishments at 30 June 1969	Persons employed (a)	Wages and salaries	Turnover	Stocks at 30 June		Purchases, transfers in and selected expenses	Value added (b)	Total wholesale sales
	No.	No.	\$m	\$m	1968	1969	\$m	\$m	\$m
Primary produce dealers or agents . . . . .	3,468	37,603	102.5	1,846.0	304.0	523.5	1,827.5	238.0	4,025.4
Wholesale merchants									
Import and/or export merchants . . . . .	3,171	35,515	111.5	2,197.1	300.2	346.0	1,926.9	316.0	2,411.5
Other wholesale merchants	18,489	210,300	590.8	8,198.0	1,015.6	1,103.0	6,880.7	1,404.8	8,263.2
Manufacturers sales branches holding stocks . . . . .	1,751	31,464	101.4	1,550.1	163.8	187.2	1,273.4	300.1	1,947.6
Commission agents or brokers . . . . .	3,426	16,847	47.0	361.9	33.3	36.5	248.2	116.8	2,514.6
Petroleum distributors . . . . .	2,387	22,186	77.4	1,660.8	124.6	141.9	1,339.1	339.0	2,811.3
Repairers and lessors of machinery and equipment . . . . .	664	4,896	14.7	85.3	4.1	5.3	28.1	58.4	27.5
<b>Total wholesale trade . . . . .</b>	<b>33,356</b>	<b>358,811</b>	<b>1,045.3</b>	<b>15,899.1</b>	<b>1,945.5</b>	<b>2,343.4</b>	<b>13,524.0</b>	<b>2,773.0</b>	<b>22,001.1</b>

For footnotes see next page.



## WHOLESALE ESTABLISHMENTS: STATES AND TERRITORIES, 1968-69

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Establishments at 30 June	11,882	9,189	4,912	3,159	2,950	920	113	231	33,356
Persons employed(a)	130,387	102,021	50,521	32,462	32,192	8,775	879	1,574	358,811
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Wages and salaries	399.5	307.1	135.0	87.0	85.6	23.6	2.8	4.8	1,045.3
Turnover	5,749.8	5,120.7	2,130.3	1,226.9	1,271.8	308.6	35.7	55.4	15,899.1
Stocks at 30 June—									
1968	644.8	759.1	214.4	135.8	143.1	39.1	4.3	4.9	1,945.5
1969	718.2	1,035.1	230.0	144.9	162.4	42.4	4.9	5.6	2,343.4
Purchases, transfers in and	4,769.4	4,571.3	1,795.5	1,006.7	1,057.7	250.7	28.5	43.9	13,524.0
Value added(b)	1,053.7	825.4	350.4	229.3	233.3	61.2	7.8	12.2	2,773.0
Total wholesale sales	8,054.8	6,910.6	2,910.4	1,699.5	1,866.6	435.8	58.1	65.2	22,001.1

(a) At end of June 1969, includes working proprietors. (b) Sales on own account, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

WHOLESALE ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY CLASS  
AUSTRALIA, 1968-69

Industry class	Number of establishments at 30 June 1969	Persons employed (a)	Wages and salaries	Turnover	Stocks at 30 June		Purchases, transfers in and selected expenses	Value added (b)	Total wholesale sales
	No.	No.	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
General wholesalers	428	9,318	26,451	346,692	43,949	46,303	297,513	51,533	593,244
Wool selling brokers, stock and station agents and farm suppliers	2,978	29,277	82,486	659,482	58,068	61,256	482,715	179,955	2,680,860
Woolbuyers and farm products wholesalers n.e.c.	993	8,401	25,974	1,437,107	258,629	495,660	1,602,808	71,329	2,039,371
Petroleum and petroleum products wholesalers	2,456	22,558	78,205	1,669,760	124,984	142,328	1,345,204	341,900	2,821,141
Iron and steel wholesalers	336	5,610	19,222	379,367	60,472	72,483	337,384	53,995	485,963
Metal scrap wholesalers	325	2,261	5,664	89,073	4,856	5,109	73,966	15,360	89,918
Metals and minerals wholesalers n.e.c.	197	2,332	8,252	350,772	19,939	24,150	326,768	28,215	453,879
Chemical and allied products wholesalers n.e.c.	497	5,814	21,218	381,488	60,942	70,159	318,610	72,095	433,101
<i>Total, Other minerals metals and chemical wholesalers</i>	<i>1,355</i>	<i>16,017</i>	<i>54,358</i>	<i>1,200,701</i>	<i>146,209</i>	<i>171,899</i>	<i>1,056,727</i>	<i>169,664</i>	<i>1,462,864</i>
Agricultural and construction machinery dealers	2,282	22,048	61,758	807,384	176,304	193,634	656,921	167,792	777,033
Tyres and motor vehicle parts wholesalers	1,050	19,235	54,158	598,989	111,524	123,892	467,330	144,029	620,933
Professional and scientific equipment wholesalers	311	3,524	10,753	85,764	19,367	21,849	64,473	23,773	89,914
Dealers in business machines, incl. computers	584	12,025	41,965	191,498	40,395	39,408	87,479	103,033	134,311
Electrical and electronic equipment wholesalers n.e.c.	1,061	13,049	40,536	484,688	71,366	82,332	397,121	98,533	571,529
Industrial machinery and equipment wholesalers n.e.c.	1,769	20,980	69,949	723,453	142,572	156,608	578,722	158,767	808,276
<i>Total, Machinery and equipment wholesalers</i>	<i>7,057</i>	<i>90,861</i>	<i>279,124</i>	<i>2,891,775</i>	<i>561,525</i>	<i>617,722</i>	<i>2,252,045</i>	<i>695,927</i>	<i>3,001,995</i>
Timber wholesalers	862	9,185	26,523	370,618	41,391	44,979	315,674	58,527	399,573
Dealers in builders' hardware and materials n.e.c.	4,057	40,844	110,182	1,073,353	136,649	146,296	855,299	227,703	1,226,008
<i>Total, Building materials and supplies wholesalers</i>	<i>4,919</i>	<i>50,029</i>	<i>136,707</i>	<i>1,443,969</i>	<i>178,040</i>	<i>191,275</i>	<i>1,170,972</i>	<i>286,233</i>	<i>1,625,581</i>
Household appliances, radio and TV wholesalers	549	9,052	26,919	400,153	40,910	49,033	331,587	76,688	465,411
China, glassware and domestic hardware wholesalers	529	3,527	9,121	98,269	15,665	16,592	75,643	23,553	140,480
Furniture and floor coverings wholesalers	530	3,064	8,176	121,903	16,232	18,172	100,891	22,951	214,054
<i>Total, Wholesalers of household appliances and hardware, furniture</i>	<i>1,608</i>	<i>15,643</i>	<i>44,216</i>	<i>620,325</i>	<i>72,807</i>	<i>83,797</i>	<i>508,122</i>	<i>123,192</i>	<i>819,946</i>

# WHOLESALE ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY CLASS AUSTRALIA, 1968-69—continued

Industry class	Number of establishments at 30 June 1969	Persons employed (a)	Wages and salaries	Turnover	Stocks at 30 June		Purchases, transfers in and selected expenses	Value added (b)	Total wholesale sales
	No.	No.	\$'000	\$'000	1968	1969	\$'000	\$'000	\$'000
Men's and boys' clothing wholesalers	502	3,789	10,003	177,910	23,810	24,488	150,198	28,390	261,000
Women's, girls' and infants' clothing wholesalers	913	5,910	14,982	220,541	23,550	23,668	181,235	39,423	361,600
Footwear wholesalers	234	1,512	4,260	73,665	3,880	4,142	60,412	13,515	139,400
Textile and textile products wholesalers n.e.c.	1,252	9,562	27,147	428,166	61,938	66,596	363,807	69,017	712,700
<i>Total, Clothing, footwear and textiles wholesalers n.e.c.</i>	<i>2,901</i>	<i>20,773</i>	<i>56,393</i>	<i>900,282</i>	<i>113,178</i>	<i>118,894</i>	<i>755,652</i>	<i>150,345</i>	<i>1,474,800</i>
Meat wholesalers	451	4,950	15,330	494,779	12,032	16,105	451,318	47,535	545,600
Poultry, smallgoods and dairy products wholesalers	652	6,786	20,083	525,086	47,398	37,406	456,858	58,236	648,800
Fruit and vegetables wholesalers	1,050	9,148	21,831	273,669	6,715	6,026	226,529	46,450	373,500
Fish wholesalers	274	3,326	7,580	140,803	9,238	11,581	121,812	21,333	156,800
Eggs wholesalers	92	2,270	5,553	111,079	4,026	3,709	100,300	10,462	102,900
Confectionery and soft drinks wholesalers	477	3,539	8,807	145,424	8,034	9,740	125,934	21,195	169,500
Beer, wine and spirits wholesalers	289	4,863	14,451	265,940	26,357	29,893	219,664	49,813	271,200
Cigarettes, cigars and tobacco wholesalers	195	3,633	11,607	435,770	19,713	20,865	405,044	31,877	513,400
Groceries and food wholesalers n.e.c.	1,199	18,011	49,167	1,088,429	88,969	90,963	962,388	128,038	1,212,300
<i>Total, Food, beverages and tobacco products wholesalers</i>	<i>4,679</i>	<i>56,526</i>	<i>154,411</i>	<i>3,480,978</i>	<i>222,481</i>	<i>226,289</i>	<i>5,069,847</i>	<i>414,940</i>	<i>3,994,310</i>
Photographic equipment and supplies wholesalers	149	2,435	7,156	81,004	9,992	12,760	58,592	25,179	83,600
Watches, clocks and jewellery wholesalers	419	2,160	5,090	61,399	15,479	16,742	47,657	15,006	69,900
Toys and sporting goods wholesalers	417	2,939	7,401	88,257	16,585	18,148	70,177	19,643	98,600
Books, periodicals, paper and paper products wholesalers	1,021	12,132	34,296	410,459	55,342	67,095	334,286	87,926	500,400
Pharmaceutical and toilet preparations wholesalers	854	12,661	35,393	426,484	49,091	51,464	332,047	96,809	526,300
Wholesalers n.e.c.	1,122	7,081	17,651	180,459	19,173	21,803	139,663	43,425	207,600
<i>Total, Other wholesalers</i>	<i>3,982</i>	<i>39,408</i>	<i>106,988</i>	<i>1,248,063</i>	<i>165,662</i>	<i>188,011</i>	<i>982,424</i>	<i>287,987</i>	<i>1,486,800</i>
<b>Total, Australia</b>	<b>33,356</b>	<b>358,811</b>	<b>1,045,313</b>	<b>15,899,134</b>	<b>1,945,532</b>	<b>2,343,434</b>	<b>13,524,029</b>	<b>2,773,005</b>	<b>22,001,000</b>

(a) At end of June 1969; includes working proprietors. (b) Sales on own account, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

**Retail trade.** The definition of 'retail trade' adopted in the 1968-69 Retail Census is the same as the definition used in previous retail censuses, i.e. the resale of new and used goods to final consumers for personal and household consumption. The basis on which previous censuses of retail establishments were conducted was described in detail in Year Book No. 56, 1970 (page 1022).

Previous censuses of retail establishments included a number of activities that were also covered by the annual manufacturing census: principally motor vehicle repairs, dry cleaning, shoe repairs and tyre retreading. Takings from these activities were reported in the retail trade census but not included in 'retail sales'. The following activities were also included in previous retail censuses if they were carried on in establishments which had retail sales of more than \$1,000: custom dress-making and custom tailoring, clothing repair and alterations, making up and repair of blinds, awnings and curtains, repairs of domestic appliances, panel beating and smash repairs, watch and clock repairs, jewellery repairs, and baking of cakes in cake shops. These activities were also covered by the annual manufacturing census. With the adoption of the new establishment concept in the 1968-69 economic censuses, no establishment was required to supply returns in more than one census and all establishments mainly engaged in the above activities are now included in the retail trade census only.

Censuses of retail trade in Australia have traditionally included certain types of service establishments in their scope, in addition to retail establishments more narrowly defined. Some of the service establishments so included make retail sales in appreciable volume as well as providing important services for which the statistics can be conveniently collected in the framework of the retail census.

The census of retail trade for 1968-69 included the following types of service establishments in its scope in addition to establishments classified to Retail Trade: motion picture theatres; cafes and restaurants; licensed hotels, motels and wine saloons; licensed clubs; laundry and dry cleaning services; and hairdressing and beauty salons. Of these service industries, cafes and restaurants, licensed hotels, motels and wine saloons and hairdressing and beauty salons had been included in previous censuses as retail establishments, while the remainder were included in the supplementary collections made from establishments not described as retail establishments.

Some changes in the scope of the retail census have been made for reasons not connected with the introduction of a standard industrial classification; for example bread vending and milk vending by independent vendors mainly engaged in retailing bread or milk by home delivery service are included for the first time.

Because of the changes which have occurred in the definition of census units, the scope of the census and the items of data collected, it is not possible to make direct comparisons between the figures obtained from the 1968-69 Retail Census and those obtained from previous retail censuses or from the monthly and quarterly retail surveys based on previous retail censuses. For further information concerning such changes and their effects on comparisons with other statistics of retail trade, reference should be made to Year Book No. 56, 1970, Chapter 31, and to *Economic Censuses, 1968-69: Retail Establishments and Selected Service Establishments—Final Bulletins*.

### RETAIL ESTABLISHMENTS AND SELECTED SERVICE ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY CLASS, AUSTRALIA, 1968-69

Industry class	Number of establishments at 30 June 1969	Persons employed (a)	Wages and salaries (b)	Turnover (b)	Stocks at 30 June		Purchases, transfers in and selected expenses (b)	Value added (b)(c)	Retail sales (b)
					1968	1969			
RETAIL ESTABLISHMENTS									
	No.	No.	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Department stores . . . . .	249	73,106	162.1	1,082.3	152.4	161.3	795.9	295.4	1,016.8
Variety and general stores . . . . .	2,466	38,642	65.1	542.8	80.5	88.3	416.1	134.6	498.1
<i>Total, Department, variety and general stores . . . . .</i>	<i>2,715</i>	<i>111,748</i>	<i>227.2</i>	<i>1,625.2</i>	<i>232.9</i>	<i>249.6</i>	<i>1,212.0</i>	<i>429.9</i>	<i>1,514.9</i>
Supermarkets . . . . .	657	28,296	57.5	641.0	37.7	42.7	543.3	102.7	634.1
Grocers and tobacconists . . . . .	22,947	76,844	65.5	1,351.3	95.1	103.7	1,142.6	217.3	1,327.7
Butchers . . . . .	9,448	34,434	63.7	598.8	5.8	6.2	453.8	145.4	594.4
Fruit and vegetable stores . . . . .	4,967	18,246	13.3	198.9	3.2	3.4	153.3	45.7	196.5
Liquor stores . . . . .	553	2,563	3.7	64.3	4.8	5.5	52.1	12.9	62.8
Confectionery and soft drink stores . . . . .	7,190	25,874	16.9	239.4	9.1	10.2	181.8	58.7	227.1
Fish, chip and hamburger shops . . . . .	3,468	12,299	7.9	94.1	1.6	1.9	64.7	29.7	89.4
Bread and cake shops . . . . .	2,709	13,345	16.5	87.0	1.6	1.9	50.9	36.3	84.7
<i>Total, Food stores . . . . .</i>	<i>51,938</i>	<i>211,901</i>	<i>245.1</i>	<i>3,274.8</i>	<i>159.0</i>	<i>175.4</i>	<i>2,642.5</i>	<i>648.7</i>	<i>3,216.5</i>
Bread vendors . . . . .	1,098	2,084	1.4	27.7	..	..	21.3	6.4	26.4
Milk vendors . . . . .	4,361	12,804	10.1	180.7	0.3	0.3	143.3	37.4	173.6
<i>Total, Bread and milk vendors . . . . .</i>	<i>5,459</i>	<i>14,888</i>	<i>11.5</i>	<i>208.4</i>	<i>0.3</i>	<i>0.3</i>	<i>164.6</i>	<i>43.8</i>	<i>199.9</i>
Furniture and floor covering stores . . . . .	2,216	13,400	30.4	279.8	38.9	43.4	209.4	75.0	271.3
Fabrics and household textile stores . . . . .	2,322	8,879	12.5	108.3	24.8	26.3	77.6	32.3	106.9
Men's and boys' wear stores . . . . .	3,155	14,440	24.5	223.6	51.4	54.9	159.0	68.1	219.4
Women's, girls' and infants' wear stores . . . . .	7,293	28,806	40.2	361.4	72.6	77.8	262.2	104.4	359.6
Footwear stores . . . . .	2,200	10,462	16.1	141.9	36.9	38.1	102.6	40.5	139.2
Shoe repairers . . . . .	1,565	2,719	2.1	11.8	0.8	0.8	4.1	7.7	1.3
<i>Total, Clothing, fabrics and furniture stores . . . . .</i>	<i>18,751</i>	<i>78,706</i>	<i>125.7</i>	<i>1,126.8</i>	<i>225.4</i>	<i>241.4</i>	<i>814.8</i>	<i>328.0</i>	<i>1,097.7</i>
Household appliance stores . . . . .	2,995	17,694	43.5	388.3	53.1	54.3	287.3	102.3	337.3
Household electric appliance repairers . . . . .	1,117	6,543	15.9	47.1	4.5	4.9	19.3	28.2	4.8
China, glassware and domestic hardware stores . . . . .	1,812	7,594	11.4	102.4	19.7	21.3	74.0	30.1	82.4
Watchmakers and jewellers . . . . .	2,149	7,902	12.1	91.2	28.4	30.7	58.5	35.0	80.1
Musical instrument and record stores . . . . .	451	2,384	4.3	35.9	6.8	7.9	24.2	12.9	33.8
<i>Total, Household appliance and hardware stores . . . . .</i>	<i>8,524</i>	<i>42,117</i>	<i>87.2</i>	<i>664.9</i>	<i>112.5</i>	<i>119.2</i>	<i>463.1</i>	<i>208.5</i>	<i>538.2</i>

For footnotes see following table.



# RETAIL ESTABLISHMENTS AND SELECTED SERVICE ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY CLASS, AUSTRALIA, 1968-69—continued

Industry class	Number of establishments at 30 June 1969	Persons employed (a)	Wages and salaries (b)	Turnover (b)	Stocks at 30 June		Purchases, transfers in and selected expenses (b)	Value added (b)(c)	Retail sales (b)
					1968	1969			
RETAIL ESTABLISHMENTS—continued									
Motor vehicle dealers and motor vehicle repairers n.e.c.	No.	No.	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Used motor vehicle and parts dealers	7,428	75,123	183.4	2,463.6	205.0	230.1	2,011.0	477.8	1,711.1
Tyre and battery retailers and tyre retreaders	2,158	11,733	31.5	552.4	49.2	53.0	465.4	90.9	506.9
Service stations	1,390	11,050	30.2	224.2	22.6	24.3	164.5	61.5	179.9
Smash repair workshops	10,340	47,057	62.0	749.9	27.1	30.2	585.4	167.5	648.6
Motor cycle dealers	3,382	19,812	40.9	142.7	5.1	5.4	67.1	75.9	6.7
Boat and caravan dealers	301	1,571	3.1	28.9	4.6	5.1	21.6	7.9	20.2
	541	2,488	5.6	95.0	11.9	13.8	80.2	16.6	75.5
Total, Motor vehicle dealers, petrol and tyre retailers	25,540	168,834	356.5	4,256.6	325.4	362.0	3,395.2	898.0	3,148.9
Pharmacies	5,786	28,519	46.3	381.5	59.0	64.6	255.0	132.1	376.0
Photographic equipment stores	351	1,474	2.8	23.5	3.6	4.0	16.1	7.7	22.1
Sporting goods, bicycle and toy shops	2,020	6,206	7.0	74.5	14.8	16.4	53.8	22.3	69.3
Newsagents, stationers and booksellers	3,892	20,729	25.5	272.2	34.0	36.6	204.4	70.3	266.3
Antique and second hand goods dealers	1,470	3,665	3.0	29.7	5.4	6.1	18.8	11.6	28.8
Nurserymen and florists	1,453	4,779	4.5	30.8	2.5	2.7	18.2	12.8	30.0
Retailers n.e.c.	2,031	7,866	10.5	66.2	8.4	9.4	36.4	30.7	46.3
Total, Other retailers	17,003	73,238	99.7	878.4	127.7	139.7	602.7	287.6	838.6
Total, retail establishments	129,930	701,432	1,152.9	12,035.1	1,183.3	1,287.7	9,295.0	2,844.5	10,555.0
SELECTED SERVICE ESTABLISHMENTS									
Motion picture theatres	No.	No.	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Cafes and restaurants	957	9,048	13.3	54.4	0.3	0.3	21.2	33.2	5.2
Licensed hotels, motels and wine saloons	4,332	36,876	48.2	209.7	4.0	5.0	109.3	101.3	45.3
	6,289	87,852	155.5	1,003.3	28.3	31.5	623.3	383.3	839.1
Total, Restaurants and licensed hotels	10,621	124,728	203.7	1,213.0	32.3	36.5	732.6	484.6	884.4
Licensed bowling clubs	1,003	6,008	12.6	58.0	1.5	1.5	26.2	31.9	33.8
Licensed golf clubs	541	4,903	10.8	37.0	0.9	1.0	14.3	22.8	16.4
Licensed clubs n.e.c.	1,217	26,958	58.1	253.8	5.3	5.9	101.3	153.0	118.3
Total, Licensed clubs	2,761	37,869	81.6	348.7	7.7	8.5	141.8	207.7	168.5
Laundries and dry cleaners	2,160	20,105	35.3	89.7	1.2	1.3	22.7	67.1	0.6
Men's hairdressing	3,243	5,448	3.3	20.2	0.7	0.8	5.2	15.0	4.6
Women's hairdressing and beauty salons	6,599	23,427	25.0	66.4	1.7	2.0	12.7	54.0	2.5
Total, Hairdressing and beauty salons	9,842	28,875	28.3	86.6	2.4	2.8	17.9	69.0	7.0
Total, Selected services establishments	26,341	220,625	362.2	1,792.5	43.8	49.3	936.2	861.7	1,065.8
Total, Retail and selected service establishments	156,271	922,057	1,515.1	13,827.6	1,227.1	1,337.0	10,231.2	3,706.2	11,620.8

For footnotes see table below.

## RETAIL ESTABLISHMENTS AND SELECTED SERVICE ESTABLISHMENTS STATES AND TERRITORIES, 1968-69

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.(d)	A.C.T.(d)	Aust.(e)
Number of establishments at 30 June 1968	No.	No.	No.	No.	No.	No.	No.	No.	No.
Persons employed(a)	57,770	43,950	22,687	14,247	11,177	4,857	554	1,025	156,271
Wages and salaries(b)	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Turnover(b)	616.7	412.7	184.0	128.3	107.3	40.7	7.4	17.7	1,515.1
Stocks at 30 June—	5,258.3	3,837.4	1,834.9	1,161.0	1,124.7	389.1	69.0	151.5	13,827.6
1968	453.7	333.5	174.9	110.5	94.6	40.1	6.2	13.6	1,227.1
1969	489.9	369.1	188.3	120.4	103.2	43.7	7.8	14.5	1,337.0
Purchases, transfers in and selected expenses(b)	3,807.8	2,862.9	1,382.0	867.3	855.3	291.6	51.7	112.0	10,231.2
Value added(b)(c)	1,486.7	1,010.0	466.3	303.7	278.0	101.1	18.9	40.5	3,706.2
Retail sales(b)	4,396.9	3,232.6	1,540.8	988.5	939.4	339.5	58.1	124.9	11,620.8

(a) At end of June; including working proprietors and unpaid helpers working at least 15 hours during the week.  
 (b) Figures relate to all establishments which operated during the year. (c) Turnover plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses. (d) Excludes motion picture theatres. (e) Includes Northern Territory and Australian Capital Territory motion picture theatres.

**Value of retail sales in each commodity group, Australia, based on  
1968-69 Census of Retail Establishments**

The following table shows the value of retail sales of goods in each of the commodity groups specified in the years 1968-69, 1971-72 and 1972-73, on a comparable basis throughout. The figures for the year 1968-69 were obtained from the 1968-69 census and figures for the other years shown are estimates based on sample surveys, on a basis comparable with the 1968-69 census.

**VALUE OF RETAIL SALES: COMMODITY GROUPS, AUSTRALIA(a)  
1968-69, 1971-72 AND 1972-73  
(\$ million)**

<i>Commodity group</i>	<i>1968-69(b)</i>	<i>1971-72</i>	<i>1972-73</i>
Groceries . . . . .	1,449.7	1,699.1	1,881.8
Butchers' meat . . . . .	649.2	746.1	824.0
Other food(c) . . . . .	929.4	1,113.6	1,192.1
<i>Total, food and groceries . . . . .</i>	<i>3,028.4</i>	<i>3,558.8</i>	<i>3,897.9</i>
Beer, wine and spirits . . . . .	1,046.4	1,371.7	1,502.2
Clothing and drapery . . . . .	1,334.8	1,658.4	1,848.0
Footwear . . . . .	222.2	275.0	295.9
Hardware, china and glassware(d) . . . . .	316.4	398.7	428.2
Electrical goods(e) . . . . .	510.2	709.0	806.2
Furniture and floor coverings . . . . .	407.6	529.3	603.2
Chemists' goods . . . . .	433.2	616.7	672.8
Newspapers, books and stationery . . . . .	314.7	365.1	402.7
Other goods(f) . . . . .	708.3	884.4	978.8
<i>Total (excluding motor vehicles, etc.) . . . . .</i>	<i>8,322.3</i>	<i>10,367.1</i>	<i>11,435.9</i>
Motor vehicles, parts, petrol, etc.(g) . . . . .	3,161.9	4,045.1	4,468.7

(a) Excludes Northern Territory and Australian Capital Territory. (b) 1968-69 census results. (c) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish, and wrapped lunches. (d) Excludes basic building materials, builders' hardware and supplies such as tools of trade, paint, etc. (e) Includes radios, television and accessories, musical instruments, domestic refrigerators, etc. (f) Includes tobacco, cigarettes, etc., sporting goods, etc., but excludes grain and produce and business machines. (g) Includes new and used motor vehicles, parts, petrol, boats, outboard motors and caravans, etc., but excludes tractors, farm machinery and implements, earth-moving equipment, etc.

**Total value of retail sales, States**

**TOTAL VALUE OF RETAIL SALES (EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.)  
STATES, 1968-69, 1971-72 AND 1972-73  
(\$ million)**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(a)</i>
1968-69(b) . . . . .	3,197.3	2,407.4	1,097.7	720.6	648.6	250.6	8,322.3
1971-72 . . . . .	3,982.1	2,897.6	1,434.0	919.1	843.9	290.4	10,367.1
1972-73 . . . . .	4,375.1	3,220.1	1,583.6	1,012.1	925.5	319.5	11,435.9

(a) Excludes Northern Territory and Australian Capital Territory. (b) 1968-69 census results.

**TOTAL VALUE OF RETAIL SALES OF MOTOR VEHICLES, PARTS, PETROL, ETC., STATES  
1968-69, 1971-72 AND 1972-73  
(\$ million)**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(a)</i>
1968-69(b) . . . . .	1,187.6	860.1	446.2	275.8	300.7	91.5	3,161.9
1971-72 . . . . .	(c)	(c)	(c)	(c)	(c)	(c)	4,045.1
1972-73 . . . . .	(c)	(c)	(c)	(c)	(c)	(c)	4,468.7

(a) Excludes Northern Territory and Australian Capital Territory. (b) 1968-69 census results. (c) Not available.

## INTERSTATE TRADE

Prior to the federation of the Australian Colonies (now States) each Colony published statistics of its trade with the other Colonies. A similar record was continued by the Commonwealth Government under the provisions of the Constitution (section 93). On the expiry of the 'bookkeeping' period these records were discontinued as from 13 September 1910, and the last published statements were for the year 1909. Later, the Governments of Western Australia and Tasmania revived the records, and relevant statistics are available again for those States. A detailed collection for Queensland was re-introduced from July 1953.

At the Conference of Statisticians held in January 1928 it was resolved that efforts should be made in other States to record the interstate movement of certain principal commodities. Complete interstate trade statistics are now published in detail for Queensland, Western Australia and Tasmania by the Deputy Commonwealth Statisticians in those States, and incomplete statistics, relating mainly to trade with Western Australia and Tasmania, by the Deputy Commonwealth Statisticians in the remaining States.

## STATISTICAL ORGANISATION IN AUSTRALIA

### Early development of Australian statistics

Statistical organisation in Australia has its origin in the 'Blue Books' which, in the Crown Colony days, were prepared annually for the information of the Colonial Office. Although intended primarily for administrative purposes, these documents were important sources of statistical data, and formed the basis from which later statistical publications were developed. Following the advent of responsible government, the 'Blue Book' was succeeded in all States by 'Statistical Registers' which, however, were still largely summaries of the 'by-product' statistics of government administrative departments.

The growing need for quantitative data concerning the progress of the several young communities of Australia led eventually to the appointment of official Statisticians commissioned to prepare and publish such data. Conferences were held between the Statisticians to allow for the interchange of ideas between States and to provide for uniform State statistics which could be aggregated to Australian totals. Altogether, six conferences were held prior to the formation of the Commonwealth Bureau of Census and Statistics in 1906—in 1861, 1875, 1890, 1900, 1902 and 1903. The holding of these conferences has been continued since the formation of the Commonwealth Bureau, and a representative from New Zealand attended up to 1928.

### Creation of the Commonwealth Bureau of Census and Statistics

Under the provisions of Section 51 of the Commonwealth Constitution, power is conferred on the Commonwealth Parliament 'to make laws for the peace, order, and good government of the Commonwealth with respect to . . .' (*inter alia*) '(XI.) Census and Statistics'. Accordingly the *Census and Statistics Act* 1905 was passed, and in 1906 the Commonwealth Bureau of Census and Statistics was created. A conference of Statisticians in 1906 defined the relations between the Commonwealth and State Bureaux, and in each case the State Statistician became the representative in his own State of the Commonwealth Statistician for the purpose of administering the Commonwealth Act. In addition, each State had its own 'Statistics Act', and although these were not identical for all States, they embodied common principles. The Commonwealth Bureau did not attempt to duplicate the existing State statistical organisations, but endeavoured to use their services whenever possible, undertaking the initial collection of statistics only in fields not covered by the States, or in which efficiency demanded complete centralisation.

### Integration of statistical services

The creation and development of the Commonwealth Bureau of Census and Statistics, the frequent conferences of Commonwealth and State Statisticians, and the close and increasing liaison between officers dealing with the same subjects in the State and Commonwealth fields did much to promote uniformity in official statistics and methods employed in their collection throughout Australia. The complete realisation of this aim could not, however, be achieved with seven separate statistical systems, even with the utmost co-operation of those concerned. This became apparent when economic problems following the 1914-18 War drew attention to deficiencies in Australian statistical data.

The first step towards integration was taken in 1924, when, in response to a proposal by the Prime Minister to the Premiers' Conference that State and Commonwealth Statistical Bureaux be amalgamated, the Tasmanian office was transferred to the Commonwealth. (Other States did not agree to the proposal at that time.) The Tasmanian office has since functioned as a Commonwealth office which also serves State statistical needs.



The varied economic and social problems of the 1920's and 1930's, the 1939-45 War and the post-war boom, and the development during and since the war of a volume of new statistics, imposed a severe strain on the statistical systems and increased the complexities of the several administrations in their efforts to secure and maintain uniformity in statistical collections.

The difficulties of maintaining efficient statistical services were further emphasised during the immediate post-war years when the problems of planning for post-war reconstruction greatly increased the demand for current economic statistics. In 1949, discussions with the Premiers were initiated by the Prime Minister, with the object of integrating the statistical services of the Commonwealth and the States. Following negotiations, all State Governments accepted the terms of draft agreements to integrate their respective statistical offices with that of the Commonwealth, and effect was given to this by the *Statistics (Arrangements with States) Act 1956*. This legislation, permissive in nature, was designed to enable the Commonwealth to enter into an agreement with any State to effect an amalgamation of Commonwealth and State statistical offices and services. The object of such an agreement was to establish an integrated statistical service, with branches in each State, operated by Commonwealth statistical officers under the immediate direction of a Deputy Commonwealth Statistician who would hold office under both the Commonwealth and State Governments. Both Commonwealth and State were to be adequately served with statistics, and no State would be required to surrender its existing powers in the field of statistics. Integration of the Commonwealth and State statistical services was finally accomplished when the integration arrangement with Victoria came into effect on 15 September 1958.

The relationships which at present exist between the Bureau and the several State Governments are a reflection of these agreements. Each State has retained its power to collect statistics under State laws, but the Commonwealth provides the staff and the funds, and is responsible for all statistical work required by both Commonwealth and State Governments. Conferences of the Commonwealth and Deputy Commonwealth Statisticians are held annually to discuss current and projected future operations of the Bureau.

Under the system as it now operates, Deputy Commonwealth Statisticians and their staffs provide the principal avenue of contact between State Government agencies and other State users and suppliers of statistical information. For the most part, negotiations with Commonwealth agencies and other national users and suppliers of statistical information are undertaken by the Commonwealth Statistician and his Central Office staff. However, the division of responsibility between the Bureau's Central and State Offices in the matter of relationships with users and suppliers of statistical information is by no means as precise as might be assumed from the above remarks. The statistical services are highly integrated and operate as one unit rather than as seven separate Bureaux. In general, it might be said that moves to develop new statistical series or to modify existing ones for State purposes are normally initiated by Deputy Statisticians, whereas moves to develop new or modified series for national socio-economic policy purposes are usually initiated by the Commonwealth Statistician.

### Scope of the Commonwealth Bureau of Census and Statistics

The scope of the Commonwealth Bureau of Census and Statistics has continually been widened. Additional requirements in the administrative, industrial, financial and scientific spheres have led to the development of many new statistical collections. All these activities are covered by the Census and Statistics Act, which empowers the Statistician to collect information and contains stringent provisions to ensure that the secrecy of information provided by individual persons and businesses is preserved.

In the Australian centralised official statistical service, it is recognised that there is a danger that official statisticians may become isolated from the thinking of the users of statistics and insensitive to the problems of the firms or individual persons whose responsibility it is to supply statistical information. The dangers inherent in this situation are for the most part obviated by the six State Offices of the Bureau keeping in very close contact with the individual businesses which use statistics and supply statistical information, and special steps are taken to ensure that users have adequate scope for expression of their needs and that requests by the Bureau for information are kept within reasonable and practical limits. The methods towards this end which have been adopted in the Bureau are reflected in its organisational structure. The organisation is on the basis of specialist subject-matter branches, and to each relatively narrow field of socio-economic activity there is a corresponding branch within the Bureau which is responsible for obtaining statistics and providing statistical services. Thus, in the Central Office, there are specialist branches dealing with primary industries; secondary industries; internal trade; employment; finance; population and vital statistics, etc. A broadly similar organisational pattern exists in State Offices of the Bureau, although local requirements have naturally given rise to differences in detail.

### Organisation of the Central Office of the Commonwealth Bureau of Census and Statistics

The Central Office of the Bureau is organised functionally into the following divisions, listed alphabetically. As shown below, these divisions are further sub-divided into specialist subject matter branches.

*Demography, Social and Manpower Division.* Demography and Social; Employment and Labour; Population Census.

*Development and Co-ordination Division.* Co-ordination; Sampling, Special Surveys and Consultation; Statistical Standards and Methodology.

*Economic Accounts Division.* National Accounts and Public Finance; Prices, Quantum and Household Expenditure.

*Economic Censuses and Surveys Division.* Internal Trade, Service Industries and Transport; Rural, Construction and Private Finance; Secondary Production, Classification and Integration.

*Overseas Transactions Division.* Foreign Investment; International Accounts and Trade.

In addition to the above-mentioned divisions and a *Management Services* branch, the Bureau has a *Computer Service Centre* which operates the largest computer network in Australia and one of the largest used for statistical purposes in the world. It comprises a Control Data 3600, 3500 and two 3300 computers in Canberra; 3300, 3200 and 160A computers in Sydney and Melbourne; 3200 and 160A computers in Adelaide and Brisbane; and 3200 computers in the remaining State capitals. All installations use a full complement of peripheral devices. Mass storage and interrogation facilities are available at Canberra, Sydney and Melbourne.

At 30 June 1973 the staff of the Bureau numbered 3,372, of whom 694 were university graduates. Of the total staff, 1,436 were employed in the Bureau's Central Office in Canberra. Expenditure for 1972-73 amounted to \$26,300,000.

### Relation of the Bureau to other Commonwealth Departments

The Commonwealth Statistician is the co-ordinating authority on all statistical activities in Commonwealth Departments, and where any new statistical field is to be established involving the regular collection of statistics, the Commonwealth Statistician must be consulted to ensure that they are necessary, that they are based on sound statistical methods and that their needs are being met by the most economical means and without duplication of effort.

The Bureau provides methodological and general statistical advice to Commonwealth Departments and instrumentalities from time to time as required. However, for some Departments, which have a continuing need for specialised statistical services, the Bureau provides, from its own staff, the key personnel to serve these needs.

## STATISTICAL AND OTHER OFFICIAL PUBLICATIONS OF AUSTRALIA

The official statistical publications of Australia may be divided bibliographically into two main divisions, namely: (i) Commonwealth publications dealing both individually and collectively with the several States of Australia; and (ii) State publications dealing with individual States only. Commonwealth publications containing statistics may be grouped under two heads, namely: (i) publications issued by the Commonwealth Statistician; and (ii) Parliamentary and Departmental Reports and Papers. State publications may similarly be grouped into publications issued by the Deputy Commonwealth Statistician in each State, and State Parliamentary and Departmental Reports and Papers. The statistics contained in the second group in each case are in the main incidental to the primary purpose of the particular report or paper.

### Publications issued by the Commonwealth Statistician

#### Principal statistical publications issued to date

The following is a list of the principal statistical publications issued from the Central Office of the Commonwealth Bureau of Census and Statistics since its inauguration. Minor changes in titles have not been referred to. Copies of a number of these publications, particularly earlier issues, are not now available.

*Australian Capital Territory Statistical Summary.* Annually, 1963 to 1973.

*Balance of Payments.* Half-yearly, 1946-47 to 1971-72; annually, 1972-73.

*Balance of Payments, Australia.* Statements Nos 1 to 3, 1928-29 to 1951-52.

*Banking and Currency.* Bulletin, annually, 1961-62 and 1962-63 (combined issue) to 1971-72.

† *Building and Construction.* Bulletin, annually, 1964-65 to 1970-71.

*Causes of Death.* Bulletin, annually, 1963 to 1969 and 1971 (combined issue).



- Census (1911) Results.* Bulletin. Vols I (Statistician's Report), II and III, with Appendix *Mathematical Theory of Population*.
- Census (1921) Results.* Bulletins, Nos 1 to 26. Parts I to XVI, forming Vol. I, and Parts XVII to XXIX (Part XXVII, Life Tables), forming, with the Statistician's Report, Vol. II.
- Census (1933) Results.* Bulletins, Nos 1 to 25. Parts I to XIV, forming Vol. I, Parts XV to XXVIII, forming Vol. II, and Parts XXIX to XXXVII, forming, with the Statistician's Report and Australian Life Tables, 1932-1934, Vol. III.
- Census (1947) Results.* Bulletins, Nos 1 to 25. Parts I to XVI, forming Vol. I, Parts XVII to XIX, forming Vol. II, and Parts XX to XXVIII, forming, with the Statistician's Report and Australian Life Tables, 1946-1948, Vol. III.
- Census (1954) Results.* Bulletins, Nos 1 to 3. Vols I to VI, comprising respectively Parts I to V for each State; Vol. VII, comprising Parts I to V for the Australian Territories; Vol. VIII, comprising Parts I to III for Australia. Australian Life Tables, 1953-1955, and the Statistician's Report.
- Census (1961) Results.* Vols I to VI, comprising respectively Parts I to V for each State; Vol. VII, comprising Parts I to V for the Australian Territories; and Vol. VIII, comprising Parts I to III for Australia, Australian Life Tables, 1960-1962, and the Statistician's Report.
- Census (1966) Results.* Summarised results for each State and Territory and for Australia have been published in a series of mimeographed bulletins available from the Commonwealth Statistician, and issue of the volumes containing the final figures is now almost complete. The volumes are Vol. I, comprising Parts I to II; Vol. 2, Parts I to V; Vol. 3; Vol. 4, Parts I to VII; and Vol. 5, Parts I to VIII.
- Census (1971) Results.* Preliminary figures of dwellings and the characteristics of population have been issued. A series of bulletins containing final figures is being issued progressively.
- \**Conference of British Commonwealth Statisticians, 1951, Report of Proceedings.*
- \**Dairying Industry* (formerly *Summary of Dairying Industry*). Bulletin, monthly, and half-yearly to 1971-72; annually 1972-73; first issue, September 1937.
- Demography.* Bulletin, annually, 1911 to 1969 and 1970 (combined issue). Commencing 1963, excludes details of causes of death, see *Causes of Death*.
- \**Digest of Current Economic Statistics.* Monthly from August 1959 onward.
- \**Export Commodity Classification, Australian.* Annually, 1966-67 to 1972-73 (sectional revisions).
- Exports, Australian.* Annually, 1958-59 to 1972-73.
- \**Factories, Principal Statistics, Summary.* Annually, 1948-49 to 1967-68.
- Finance.* Bulletin, 1907 to 1960-61. Commencing 1955-56, issued in two parts—Part I, Public and Private Finance; Part II, Commonwealth Taxation. Commencing 1961-62, issued as five separate bulletins, see *Banking, Finance (2), Insurance, and Taxation*.
- Finance, Commonwealth.* Bulletin, annually, 1961-62 and 1962-63 (combined issue) to 1969-70. (Commencing with the 1970-71 issue, title changed to *Public Authority Finance: Commonwealth Authorities*; commencing with the 1971-72 issue, title changed to *Public Authority Finance: Authorities of the Australian Government*.)
- Finance, Public Authority.* Bulletin, annually, 1969-70 first issue.
- Finance, Public Authority: Authorities of the Australian Government.* Bulletin, annually, 1972-73 (see following publication).
- ‡*Finance, Public Authority: Commonwealth Authorities.* Bulletin, annually, 1970-71 and 1971-72. (commencing with the 1972-73 issue, title changed to *Public Authority Finance: Authorities of the Australian Government*.)
- Finance, State, Territory and Local Government Authorities, and Local Government Securities.* Bulletin, annually, 1961-62 and 1962-63 (combined issue) to 1967-68.
- \**Food Production and the Apparent Consumption of Foodstuffs and Nutrients, Report on.* Bulletin, half-yearly, 1946-47 to 1947-48; annually, 1948-49 to 1971-72.
- \**Fruit Growing Industry* (formerly *Summary of Fruit Growing Industry*). Bulletin, annually, 1944-45 to 1971-72.
- \**Import Commodity Classification, Australian.* Annually, 1965-66 to 1972-73 (sectional revisions).
- Imports, Australian.* Bulletin, annually, 1967-68 to 1972-73.
- Imports Cleared for Home Consumption.* Annually, 1950-51 to 1972-73.



- Insurance and Other Private Finance (other than Banking and Currency)*. Bulletin, annually, 1961-62 and 1962-63 (combined issue) to 1968-69 and 1969-70 (combined issue)
- Labour and Industrial Statistics*. Memoranda and Reports, various, to 1922.
- Labour Report*, 1913 to 1972.
- Life Tables, Australian*, 1901-1910. *Australian Joint Life Tables*, 1901-1910.
- Life Tables, Australian*, 1920-1922.
- Life Tables, Australian*, 1932-1934. *Australian Joint Life Tables*, 1932-1934.
- Life Tables, Australian*, 1946-1948.
- Life Tables, Australian*, 1953-1955.
- Life Tables, Australian*, 1960-1962.
- Life Tables, Australian*, 1965-1967.
- \**Livestock Statistics* (formerly *Summary of Livestock Statistics and Livestock Numbers*). Bulletin, annually, 1943 to 1972.
- Local Government in Australia*, July 1919.
- Manufacturing Commodities*. Bulletin, annually, 1963-64 and 1964-65 (combined issue) to 1966-67 and 1967-68 (combined issue).
- Manufacturing Commodities: Principal Materials Used*. Bulletin, annually, 1968-69 and 1969-70 (combined issue), 1971-72.
- \**Manufacturing Establishments: Details of Operations by Industry Class*. Bulletin, annually, 1968-69, 1969-70, 1971-72.
- Manufacturing Industries*. Bulletins on individual industries, annually, 1936-37 to 1939-40, 1940-41 (issue incomplete) and 1944-45 to 1967-68.
- Manufacturing Industry*. Bulletin, annually, 1963-64 to 1967-68.
- Manufacturing Industry, Australian, Overseas Participation in, Part I—Overseas Ownership and Part II—Overseas Control*, 1962-63 and 1966-67.
- §*Mineral Industry, The Australian* (formerly *Minerals and Metals Bulletin*). Part II—*Quarterly Statistics* of a quarterly bulletin issued jointly with the Bureau of Mineral Resources.
- \**Mining Establishments: Details of Operations*. Bulletin, annually, 1968-69 to 1970-71 (combined issue), 1971-72.
- Mining Industry, Australian, Overseas Participation in*. Bulletin, annually, 1967 and 1968.
- Monthly Review of Business Statistics*. October 1937 onward.
- Motor Vehicles, Census of, 31st December 1955*. Bulletins, Nos. 1 to 8.
- Motor Vehicles, Census of, 31st December 1962*. Bulletins, Nos 1 to 9.
- \**Motor Vehicles, Census of, 30 September 1971*. Bulletins 1 to 9.
- Motor Vehicles, Survey of (1947-48), Results*. Bulletins, Nos 1 to 7.
- National Accounts, Australian (National Income and Expenditure)*, 1948-49 to 1961-62, first issue, mimeographed\*, to 1972-73.
- ||*Non-rural Primary Industries*. Bulletin, annually, 1964-65 to 1967-68 and 1968-69 (combined issue).
- Non-rural Primary Industries and Value of Production*. Bulletin, annually, 1962-63 and 1963-64. (Commencing 1964-65 issued as two separate Bulletins, see *Non-rural Primary Industries*, and *Value of Production*.)
- Northern Territory Statistical Summary*. Annually, 1960 to 1973.
- \**Occupation Survey (1945) Results*. Detailed tables.
- Official Year Book of the Commonwealth of Australia*. 1907 to present issue (No. 58). Issues Nos 40 to 51 also published in parts.
- Pocket Compendium of Australian Statistics* (formerly *Statistical Digest*). 1913, 1914, 1916 and 1918 to 1973, annually.
- Population and Vital Statistics*, Bulletins and Reports, various, 1906-1910.
- Primary Industries*. Bulletins, annually, 1950-51 to 1961-62 in two parts—Part I, Rural Industries; Part II, Non-rural Primary Industries and Value of Production. Commencing 1962-63, issued as two separate Bulletins, see *Rural Industries* and *Non-rural Primary Industries and Value of Production*.

- Primary Industries, Australian.* Report prepared for the Empire Producers Conference, Sydney, March 1938.
- Production.* Bulletin, annually, 1906 to 1949–50. From 1936–37 to 1949–50 issued in two parts—Part I, Secondary Industries; Part II, Primary Industries (including Total Recorded Production); thereafter separate Bulletins (*see Primary Industries and Secondary Industries*).
- Professional Papers.* Various. A full list appears in Official Year Book No. 13, page 3.
- \**Publications of the Australian Bureau of Statistics.* Annually since 1950.
- Quarterly Summary of Australian Statistics* (replaced *Monthly Summary of Australian Statistics*). December 1917 onward.
- \**Retail Establishments, Census of (1947–48), Results.* Bulletins, Nos 1 to 7.
- \**Retail Establishments, Census of (1948–49), Results.* Bulletins, Nos 1 to 7.
- \**Retail Establishments, Census of (1952–53), Results.* Bulletins, Nos 1 to 14.
- Retail Establishments, Census of (1956–57), Results.* Bulletins, Nos 1 to 8 (mimeographed\*) and 9 to 15 (printed).
- Retail Establishments and Other Services, Census of (1961–62), Results.* Bulletins, Nos 1 to 7 (printed) and 8 to 9 (mimeographed\*).
- \**Rural Holdings, Classification by Size and Type of Activity, 1959–60.* Bulletins, Nos 1 to 7.
- Rural Holdings, Classification by Size and Type of Activity, 1965–66.* Bulletins, Nos 1 to 7.
- Rural Holdings, Classification by Size and Type of Activity, 1968–69.* Bulletins, Nos 1 to 7.
- Rural Holdings, Size Classification of, 1955–56.* Bulletins, Nos 1 to 7.
- Rural Industries.* Bulletin, annually, 1962–63 to 1969–70.
- \**Rural Land Use and Crop Production* (formerly *Summary of Crop Statistics*). Bulletin, annually, 1943–44 to 1970–71.
- \**Rural Land Use, Improvements, Agricultural Machinery and Labour.* Bulletin, annually, 1971–72.
- Seasonally Adjusted Indicators.* Bulletin, annually, 1967 to 1973.
- Secondary Industries.* Bulletin, annually, 1950–51 to 1962–63 (commencing 1960–61 issued in two parts—Part I, Factory and Building Operations; Part II, Materials Used and Articles Produced in Factories). Commencing 1963–64 issued as separate bulletins, *see Manufacturing Establishments, Manufacturing Industry, Manufacturing Commodities, and Building and Construction*.
- Social Insurance.* Report to the Hon. the Minister for Trade and Customs, 1910.
- Social Statistics.* Bulletin, 1907 to 1915 annually, and 1918.
- Superannuation for the Commonwealth Public Service.* Report to the Hon. the Minister for Home Affairs, 1910.
- Taxation Assessments, Commonwealth, Annually, 1961–62 to 1970–71.*
- Trade, Overseas.* Bulletin, annually, 1906 to 1972–73.
- \**Trade, Overseas.* Preliminary Bulletin, annually, 1952–53 to 1972–73, in two parts—Part 1, Exports; Part 2, Imports. (*See also Exports, Australian; Imports, Australian; and Imports Cleared for Home Consumption.*)
- Transport and Communication.* Bulletin, 1906, 1908 to 1916 annually, 1919 to 1930 annually and 1932 to 1970–71 annually.
- || *Value of Production.* Bulletin, annually, 1964–65 to 1968–69.
- Wealth.* The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report on the War Census in 1915.
- \**Wheat Industry* (formerly *Summary of the Wheat Situation*). Bulletin, periodically; first issue, July 1936; now issued annually, 1972–73, and 1973–74 (Preliminary), with annual supplement, 1972–73 (Preliminary).
- \**Wholesale Establishments, Census of (1968–69), Results.* Final Bulletin.
- \**Wool Production and Utilisation.* Bulletin, annually, 1952–53 to 1972–73.

\* Distributed by the Commonwealth Statistician—for methods of obtaining other publications still in print *see back of this volume*.

† Previously included in *Secondary Industries, Part I—Factory and Building Operations*.

‡ Prior to 1970–71 issue, title was *Commonwealth Finance*.

§ Copies available from the Bureau of Mineral Resources, Canberra and the Department of Minerals and Energy, Melbourne and Sydney

|| Included in *Non-rural Primary Industries and Value of Production* prior to 1964–65.

### Current or recent statistical publications

The Central and State offices of the Commonwealth Bureau of Census and Statistics issue approximately 2,300 publications (600 separate titles) in printed and mimeographed form annually. Information on these publications is contained in *Publications of the Commonwealth Bureau of Census and Statistics*, 1973, available free on request from the Commonwealth Statistician, Canberra. This contains a list of all Bureau publications, a subject index to show the Central Office publications in which information on the various subjects dealt with by the Bureau is to be found, and short descriptions of major Central Office publications. The information on issues in this publication is supplemented in monthly statements. At the end of this Year Book there is a list of the current printed publications of the Central Office of the Bureau: the prices shown after the number and year of issue are, in order, price excluding postage, and price including postage in Australia.

### Commonwealth and State Parliamentary and Departmental Reports and Papers

No comprehensive list of current publications of this nature is available, but the National Library of Australia issues a quarterly publication (with annual cumulation) *Australian Government Publications*, a list of official publications of the Commonwealth, States and Territories, compiled from records of material received by the Library during the year.

The Australian Government Publishing Service, Canberra, issues a monthly publication *Australian Government Publications*. This publication lists Commonwealth publications currently becoming available or in stock, showing the titles and prices of Parliamentary Papers, Parliamentary Debates (Hansard), records of Parliamentary proceedings, Acts, Statutory Rules, Ordinances, and departmental bulletins and reports issued annually or irregularly.

Australian Government publications may be purchased *through the mail* from Mail Order Sales, Australian Government Publishing Service, P.O. Box 84, Canberra, A.C.T. 2600; *over the counter* from the Government Publications and Inquiry Centres in each State capital; and *through the mail or over the counter* from the Deputy Commonwealth Statistician in each State capital.

The National Library of Australia issues annually a publication *Australian Books*, a reprint of the 1966 issue of which is included on pages 1231–77 of Year Book No. 53. See the chapter Education, Cultural Activities and Research for further information concerning the National Library's publicising of Australian publications.

## METRIC CONVERSION FOR AUSTRALIA

### Weights and measures in Australia

Australia inherited the 'Imperial' system of weights and measures from the United Kingdom. The *Commonwealth of Australia Constitution Act* of 1900 provided the newly formed Commonwealth Parliament with powers to make laws governing weights and measures (Section 51 (xv)). This power was not exercised till 1948 when a *Weights and Measures (National Standards) Act* was passed. This Act provided '... for the establishment and use throughout Australia of uniform units of measurement, and uniform standards of measurement, of physical quantities ...'.

The Act transferred to the Commonwealth the power to specify particular units for particular purposes. In 1960, because it was felt that the States should be able to exercise certain of these powers, the 1948 Act was repealed and replaced by an Act which allowed the States to legislate in certain areas.

### The National Standards Commission

The *Weights and Measures (National Standards) Act* 1960–1966 Section 4: states that 'The objects of this Act are to provide for the establishment and use throughout Australia of uniform units of measurement and uniform standards of measurement of physical quantities'.

The responsibility for achieving these aims is in the hands of the National Standards Commission, which is empowered to set up an adequate system for standardising the measurement of physical quantities for Australia, the units that are to be part of that system, and means of assuring the traceability of standards back to the Commonwealth standards maintained by the Commonwealth Scientific and Industrial Research Organisation. The Commission represents Australia on the International Organisation of Legal Metrology (OIML) which provides a forum and working organisation whose objective is to achieve international uniformity of measuring processes.

New legislation is currently under consideration to give effect to the decision of the Commonwealth Government to introduce a metric system of units and measurements as the sole system of measurement in Australia. A hybrid system of metric units has always been permitted as an



alternative to imperial units under the regulations which the Commission administers. Changes are to be made so that the system of metric units to be adopted will conform with the International System (SI) of units.

In 1966 at the request of the States the Commonwealth Government revised the functions of NSC to include responsibility for the approval of patterns of measuring instruments for use in trade; these are the patterns of instruments required by State Weights and Measures laws, to be checked and verified at regular intervals. For this purpose, the Commission set up the Pattern Approval Laboratory which currently approves in the vicinity of fifty new patterns annually.

#### **Commonwealth legal units**

The Commonwealth legislation is intended to define those units which are legal for measurement. Section 7 of the above act states that the regulations may prescribe units of measurement of any physical quantity and those units shall be the sole legal unit of measurement of that quantity.

However, the use of such units for the purpose of trade is, in general, controlled by State legislation. Until 1972 the States had only permitted the use of the imperial units; consequently, goods sold in the shops in Australia had to be marked with their contents in imperial units. As a step towards the conversion, many goods may now (from September 1972) be sold in packages marked solely in metric units.

#### **The decision to change**

In April 1967, a Senate Select Committee was appointed to inquire into the metric system of weights and measures. Between then and May 1968, the Committee, under the chairmanship of Senator K. A. Laught, heard evidence, in all capital cities, from 141 witnesses, and received written submissions from 54 persons or organisations.

The Committee reported unanimous agreement that it was practicable and desirable for Australia to adopt the metric system of weights and measures at an early date. The Committee's findings included the following.

Evidence from a wide segment of the community overwhelmingly supported an early change to the sole use of the metric system and indicated that there would be no insuperable difficulties. About 90 per cent of the world's population already use metric measurements and this use is increasing.

About 75 per cent of world trade is carried out in metric terms. Some 70 per cent of Australia's export trade is to countries using or converting to metric weights and measures. This proportion will increase as Australia's trade with Japan and South-East Asian countries grows.

A metric system would improve the teaching of mathematics and science, reduce errors and save time.

A metric system would provide an opportunity to improve industrial and manufacturing efficiency by rationalising existing practices and reducing unnecessary varieties in sizes and components.

Introduction of a metric system was widely regarded as a natural consequence of Australia's earlier conversion to decimal currency. The full advantages of decimal currency would not be experienced until decimal weights and measures were also used.

The Committee was satisfied that the ultimate benefits of conversion would greatly exceed the costs.

#### **Metric Conversion Board**

*The Metric Conversion Act 1970* was assented to on 12 June 1970 and stated as its object (in Section 5) 'to bring about progressively the use of the metric system of measurement in Australia as the sole system of measurement of physical quantities'. It provided the Minister with powers on behalf of the Commonwealth, to do such things, make such arrangements and enter into such agreements as he thinks conducive to the attainment of this objective, and it established the Metric Conversion Board. It extended to all the Territories of the Commonwealth except Papua New Guinea.

In most other countries that are presently converting to the metric system, a Board has been appointed to give guidance for the change. Thus in the United Kingdom the Metrication Board was appointed in 1969, in South Africa a Metrication Advisory Board was appointed in 1967, and in New Zealand a Metric Advisory Board was appointed in 1970.

The Metric Conversion Act provided for such a Board and on 1 July 1970 a Board of thirteen members was appointed under the chairmanship of Mr J. D. Norgard, B.E., F.A.S.A.S.M. (Met.). It comprises members who are experienced in many of the sectors for which conversion will be important. They are drawn from all States of the Commonwealth and include representatives of industry, commerce, the States and the Commonwealth. In July 1972, the membership of the Board was increased to fourteen.

**Committees of the Board**

The Government has made it clear that the metric change will be predominantly voluntary. It will be planned and implemented by those who will themselves be affected by it. Accordingly, the Board's first major task was to establish a committee structure to assist in the development and implementation of conversion programs. All the major activities within the community likely to be affected by metric conversion were identified. They were then grouped so that each activity group would have an Advisory Committee responsible for its conversion. Each Advisory Committee was supported by several Sector Committees. These comprised nominees from appropriate organisations, national associations and institutes, and Government departments. They were established to cover specific activities. Where a specific aspect of conversion requires detailed consideration a Panel may be appointed to report to a Sector Committee.

The Advisory Committees are each chaired by a Board Member and have the task of co-ordinating the programs and proposals for conversion before submitting them to the Board for consideration for inclusion in overall conversion plans.

By June 1971, as indicated in the First Annual Report of the Board, all 11 Advisory Committees had been established. In all, more than 600 individual members, drawn from virtually all relevant business, professional, technical and government fields, had been appointed to Advisory and Sector Committees, filling some 800 committee positions. By June 1972, as the Board's Second Annual Report indicates, planning of conversion programs was well advanced in many sectors.

The chart on page 1046 shows the present structure of the Board and its committees. This structure will be changed appropriately as conversion proceeds. Now that programs have been prepared and issued the work of many sector committees is nearing completion.

**International system of units**

In general Australia is adopting the International System of Units, commonly known by its abbreviation SI (*Système Internationale*). This is the system adopted by the International General Conference on Weights and Measures.

Many people are familiar with the centimetre-gram-second (CGS) system which has long been in use in physical science. Whilst the SI system closely resembles the CGS system, it is not identical with it. Many people living in Europe are familiar with many of the SI units but they also use units which are not part of the SI system. For example, such units as the dyne and the erg do not appear in the SI system.

The International System of Units comprises a set of seven base units, some supplementary units for angular measurement, and derived units. The base units are the metre (length), kilogram (mass), second (time), ampere (electrical current), kelvin (temperature), candela (luminous intensity), and mole (amount of substance). A striking advantage of SI over the older system is that there is only one SI unit for each physical quantity and also there are no odd multiplying factors to be remembered. Some of the derived units have special names (e.g. the joule, the watt) while for others the names are derived from the base units comprising them (e.g. the metre per second).

In addition, for larger or smaller amounts, decimal multiples or submultiples of the SI unit may be used. The names of each of these is obtained by combining a prefix with the name of the unit. The prefixes, with their symbols and values, are as follows:

Prefix	Symbol	Value
Commonly used:		
giga . . . . .	G	10 <sup>9</sup>
mega . . . . .	M	10 <sup>6</sup>
kilo . . . . .	k	10 <sup>3</sup>
centi . . . . .	c	10 <sup>-2</sup>
milli . . . . .	m	10 <sup>-3</sup>
micro . . . . .	μ	10 <sup>-6</sup>
Less commonly used:		
tera . . . . .	T	10 <sup>12</sup>
hecto . . . . .	h	10 <sup>2</sup>
deka . . . . .	da	10
deci . . . . .	d	10 <sup>-1</sup>
nano . . . . .	n	10 <sup>-9</sup>
pico . . . . .	p	10 <sup>-12</sup>
femto . . . . .	f	10 <sup>-15</sup>
atto . . . . .	a	10 <sup>-18</sup>

NOTE. It is recommended that only multiples of 10<sup>9</sup> be used and except in special cases the prefixes hecto, deka, deci and centi should be avoided.

Some units are not decimally related to the basic SI units but are of such significance that their continued use is necessary. Notable examples are the minute and hour for time intervals, and the degree, minute and second for angular measurement. Other non-SI units such as the nautical mile (1,852 metres) are the subject of international agreements, so their use must be continued for limited applications. There are other non-SI units which are provided for practical purposes in the public interest: for example, car speeds are quoted in kilometres per hour rather than metres per second.

Special names of SI units which are being recommended by the Metric Conversion Board for general use include the litre ( $10^{-3}$  cubic metres), the tonne (1,000 kilograms) and the hectare (10,000 square metres). The millibar has been recommended for the measurement of pressure for meteorological purposes only, because of international meteorological practice. Non-SI units recommended for restricted use in particular industries only, include the nautical mile and knot for marine and aerial navigation and the kilowatt hour for the measurement of electrical energy.

The table on page 1047 lists the most important everyday metric units with some of the imperial units they will replace and the conversion factors.

### Program and planning

Conversion is expected to proceed simultaneously throughout many different sectors of the community. Unlike the decimal currency change there will be no single starting or finishing date for the change. For some activities such as for pharmaceuticals, the change has already been made.

Each sector is developing a program appropriate to its activities and circumstances, but in the process account must be taken of related activities in other sectors. The structure of Sector and Advisory Committees established by the Board is intended to facilitate the development of individual programs, and their integration into an overall conversion program.

The broad aim laid down by the Government in 1970 was that conversion should be substantially complete by 1980. Within this broad objective the following stages of implementation have been established:

1970-71	.	.	.	.	Planning and co-ordination
1972	.	.	.	.	Increasing public awareness
1973-75	.	.	.	.	Major implementation
1976	.	.	.	.	70-80 per cent of nation's activity to be converted.

Progress is generally on schedule. Programs are being issued for many sectors of commerce and industry, while conversion activities are becoming increasingly noticeable.

### Detailed programs

Conversion has been completed in the following areas:

Clay bricks, meteorology (temperature forecasts), horse racing, packaged goods (sole metric marking permitted), customs-excise Tariffs, tide tables, wool sales (bulk), new land titles.

During 1972 conversion was initiated in the following areas:

Primary education, farm milk tanks, wholesale meat, wine industry (bulk), wheat, barley, coarse grains, sugar.

During 1973 conversion is expected to be complete in the following areas:

Advertising, bread, building and construction (design), concrete bricks, all primary and secondary education, flat glass manufacture, furniture, retail meat, wind speed forecasts, paper, pharmaceutical packaging, printing, plastics and chemicals, ready-mixed concrete, storage, transport freight rates, water and sewerage rates.

### References

Report of the Senate Select Committee on the Metric System, Parliamentary Paper No. 19 of 1968.  
*Metric Conversion for Australia*, Metric Conversion Board 1971.

First Annual Report of the Metric Conversion Board for the year 1970-71, Parliamentary Paper No. 260.



## METRIC CONVERSION—ORGANISATION

Minister for Science

Metric Conversion Board  
(Chairman: J. D. Norgard)

## Advisory Committees

Education and Industrial Training	Primary Industry	Consumer Goods and Service Industries	Engineering Industry	Building and Construction	Industrial Materials	Science and Technology	Transport and Communications	Land, Fuel Power and Public Services	Health and Recreation	Public Relations
<i>Sector Committees</i>	<i>Sector Committees</i>	<i>Sector Committees</i>	<i>Sector Committees</i>	<i>Sector Committees</i>	<i>Sector Committees</i>	<i>Sector Committees</i>	<i>Sector Committees</i>	<i>Sector Committees</i>	<i>Sector Committees</i>	<i>Sector Committees</i>
Primary Education	Grains and Seeds	Packaging Materials	Mining and Metallurgy	Government Construction	Timber	Research and Technology	Road Transport	Petroleum Products	Medical	
Secondary Education	Wool	Packaged Goods	Iron and Steel	Civil Engineering and Architecture	Forestry	Meteorological Services	Railway Transport	Electricity Generation and Distribution	Pharmaceutical	
Tertiary Education (University)	Beef, Mutton and Lamb	Bread and Pastry	Non-Ferrous Metals	Building	Paper, Pulp and Printing	Instruments	Water Transport	Gas Production	Recreation and Professional Sport	
Tertiary Education (Non-University)	Pigs	Beverages and Licensed Premises	Fabricated Metal Products	Building Supply	Refractories Materials	Liquid measurement	Air Transport	Water and Sewerage	Amateur Sport	
Technical Education	Tropical Fruits	Textiles	Automotive Engineering		Plastic, Chemicals and Petroleum Derivatives	Weights and Measures	Storage Communications	Land and Surveying	Safety	
Industrial Training	Vegetables	Clothing	Ship Building		Rubber and Allied Products	Units	Automotive Services	Public Administration	Youth Activities	
Adult Education	Tobacco	Meat Products	Locomotive and Rolling Stock							
	Pome, Stone, Berry Fruits	Household Utensils and Equipment	Aeronautical Engineering							
	Cotton	Financial and Commercial Activity	Electronics and Electrical Engineering							
	Sugar	Personal Services	Machine and Machine Tools							
	Fishing	Wholesaling and Retailing (Large)	Chemical Engineering							
	Game Furskin and Miscellaneous	Wholesaling and Retailing (Other)								
	Agricultural Machinery	Dairy Products (with Consumer Goods and Service Industries)								

## METRIC UNITS AND CONVERSION FACTORS

Quantity	Imperial unit	Metric unit	Conversion Factors	
			Imperial to Metric units	Metric to Imperial units
Length	inch (in)	millimetre (mm) or centimetre (cm)	1 in = 25.4 mm	1 cm = 0.394 in
	foot (ft)	centimetre (cm) or metre (m)	1 ft = 30.5 cm	1 m = 3.28 ft
	yard (yd)	metre (m)	1 yd = 0.914 m	1 m = 1.09 yd
	furlong (fur)	metre (m) or kilometre (km)	1 fur = 201 m	1 km = 4.97 fur
	mile	kilometre (km)	1 mile = 1.61 km	1 km = 0.621 mile
For navigation		international nautical mile (n mile)	1 n mile = 1852 m	
Mass	ounce (oz)	gram (g)	1 oz = 28.3 g	1 g = 0.0353 oz
	pound (lb)	gram (g) or kilogram (kg)	1 lb = 454 g	1 kg = 2.20 lb
	stone	kilogram (kg)	1 stone = 6.35 kg	1 kg = 0.157 stone
	ton	tonne (t)	1 ton = 1.02 t	1 t = 0.984 ton
Area	square inch (in <sup>2</sup> )	square centimetre (cm <sup>2</sup> )	1 in <sup>2</sup> = 6.45 cm <sup>2</sup>	1 cm <sup>2</sup> = 0.155 in <sup>2</sup>
	square foot (ft <sup>2</sup> )	square centimetre (cm <sup>2</sup> ) or square metre (m <sup>2</sup> )	1 ft <sup>2</sup> = 929 cm <sup>2</sup>	1 m <sup>2</sup> = 10.8 ft <sup>2</sup>
	square yard (yd <sup>2</sup> )	square metre (m <sup>2</sup> )	1 yd <sup>2</sup> = 0.836 m <sup>2</sup>	1 m <sup>2</sup> = 1.20 yd <sup>2</sup>
	perch (p)	square metre (m <sup>2</sup> )	1 p = 25.3 m <sup>2</sup>	1 m <sup>2</sup> = 0.0395 p
	rood (rd)	hectare (ha)	1 rd = 0.101 ha	1 ha = 9.88 rd
	acre (ac)	hectare (ha)	1 ac = 0.405 ha	1 ha = 2.47 ac
	square mile	square kilometre (km <sup>2</sup> )	1 square mile = 2.59 km <sup>2</sup>	1 km <sup>2</sup> = 0.386 square mile
Volume	cubic inch (in <sup>3</sup> )	cubic centimetre (cm <sup>3</sup> )	1 in <sup>3</sup> = 16.4 cm <sup>3</sup>	1 cm <sup>3</sup> = 0.0610 in <sup>3</sup>
	cubic foot (ft <sup>3</sup> )	cubic metre (m <sup>3</sup> )	1 ft <sup>3</sup> = 0.0283 m <sup>3</sup>	1 m <sup>3</sup> = 35.3 ft <sup>3</sup>
	cubic yard (yd <sup>3</sup> )	cubic metre (m <sup>3</sup> )	1 yd <sup>3</sup> = 0.765 m <sup>3</sup>	1 m <sup>3</sup> = 1.31 yd <sup>3</sup>
	bushel (bus)	cubic metre (m <sup>3</sup> )	1 bus = 0.0364 m <sup>3</sup>	1 m <sup>3</sup> = 27.5 bus
Volume (fluids)	fluid ounce (fl oz)	millilitre (ml)	1 fl oz = 28.4 ml	1 ml = 0.0352 fl oz
	pint (pt)	millilitre (ml) or litre (l)	1 pt = 568 ml	1 litre = 1.76 pt
	gallon (gal)	litre (l) or cubic metre (m <sup>3</sup> )	1 gal = 4.55 litres	1 m <sup>3</sup> = 220 gal
	acre foot	cubic metre (m <sup>3</sup> ) or megalitre (Ml)	1 acre foot = 1230 m <sup>3</sup> = 1.23 Ml	1 Ml = 0.811 acre-foot
Force	pound-force (lbf)	newton (N)	1 lbf = 4.45 N	1 N = 0.225 lbf
	ton-force (tonf)	kilonewton (kN)	1 tonf = 9.96 kN	1 kN = 0.100 tonf
Pressure	pound per square inch (psi)	kilopascal (kPa)	1 psi = 6.89 kPa	1 kPa = 0.145 psi
	atmosphere (atm)	kilopascal (kPa) or megapascal (MPa)	1 atm = 101 kPa	1 MPa = 9.87 atm
	ton per square inch (ton/in <sup>2</sup> )	megapascal (MPa)	1 ton/in <sup>2</sup> = 15.4 MPa	1 MPa = 0.0647 ton/in <sup>2</sup>
For meteorology	inch of mercury (inHg)	millibar (mb)	1 inHg = 33.9 mb	1 mb = 0.0295 inHg 1 mb = 100 Pa
Speed For navigation	mile per hour (mph)	kilometre per hour (km/h)	1 mph = 1.61 km/h	1 km/h = 0.621 mph
		knot (kn)	1 kn = 1.85 km/h	
Temperature	degree Fahrenheit (°F)	degree Celsius (°C)	°C = $\frac{5}{9}(°F - 32)$ °F = $\frac{9}{5}°C + 32$	
Density	pound per cubic inch (lb/in <sup>3</sup> )	gram per cubic centimetre (g/cm <sup>3</sup> )	1 lb/in <sup>3</sup> = 27.7 g/cm <sup>3</sup>	1 g/cm <sup>3</sup> = 0.0361 lb/in <sup>3</sup>
		= tonne per cubic metre (t/m <sup>3</sup> )	1 lb/in <sup>3</sup> = 27.7 t/m <sup>3</sup>	1 t/m <sup>3</sup> = 0.0361 lb/in <sup>3</sup>
	ton per cubic yard	tonne per cubic metre (t/m <sup>3</sup> )	1 ton/yd <sup>3</sup> = 1.33 t/m <sup>3</sup>	1 t/m <sup>3</sup> = 0.752 ton/yd <sup>3</sup>
Energy	British thermal unit (Btu)	kilojoule (kJ)	1 Btu = 1.06 kJ	1 kJ = 0.948 Btu
	therm	megajoule (MJ)	1 therm = 106 MJ	1 MJ = 9.48 × 10 <sup>-3</sup> therm
For electrical energy		kilowatt hour (kWh)	1 kWh = 3.60 MJ	
Power	horsepower (hp)	kilowatt (kW)	1 hp = 0.746 kW	1 kW = 1.34 hp
Time		second (s)		1 min = 60s
		minute (min)		1 h = 3600 s
		hour (h)		
Frequency	cycle per second (c/s)	hertz (Hz)	1 c/s = 1 Hz	1 Hz = 1 c/s
Angular velocity	revolution per minute (rpm)	radian per second (rad/s)	1 rpm = 0.105 rad/s	1 rad/s = 9.55 rpm
		revolution per minute (rpm)		





## STATISTICAL SUMMARY: AUSTRALIA

In earlier issues of the Year Book, it was the practice to include in the Statistical Summary figures for every tenth year of the period 1861 to 1901, plus the latest year for which data were available. In each subsequent issue the latest year available was substituted for the year immediately preceding it until the next tenth year had been reached, and the earliest year in the series was eliminated as space was needed. In consequence of this system no single issue of the Year Book contained a continuous yearly series.

In this and recent issues of the Year Book, this defect has been remedied in part by the inclusion of a continuous series back to the year 1941, with earlier tenth years back to 1901 (the National Accounts series on page 1040 has been carried back to 1900-01 in single years). In issue No. 39, pages xxviii-xxix, some of the series are shown for every tenth year from 1861 to 1941. There are, however, discrepancies between the original series and the series now published.

Breaks in series, preliminary figures, etc., are indicated by the symbols shown on page xiii of this Year Book.

## STATISTICAL SUMMARY: AUSTRALIA

### DEMOGRAPHY

Year ended 31 De- cember—	Population(a)			Natural in- crease	Over- seas migra- tion(b)	Marriages		Divorces (c) and judicial separa- tions	Births		Deaths		Infant deaths	
	Males	Fe- males	Per- sons			No.	Rate(d)		No.	Rate(d)	No.	Rate(d)	No.	Rate(e)
1901	'000	'000	'000	'000	'000	'000		No.	'000		'000		'000	
1911	2,005	1,820	3,825	56.6	17.8	28	7.3	398	103	27.2	46	12.2	10.7	103.6
1921	2,382	2,192	4,574	74.3	77.7	39	8.8	509	122	27.2	48	10.7	8.4	68.5
1931	2,799	2,712	5,511	82.1	17.3	47	8.6	1,490	136	25.0	54	9.9	9.0	65.7
	3,333	3,220	6,553	61.9	-10.8	39	6.0	1,969	119	18.2	57	8.7	5.0	42.1
1941	3,599	3,545	7,144	63.3 <sup>(f)</sup>	5.2 <sup>(g)</sup>	75	10.6	3,351	135	18.9	71 <sup>(h)</sup>	10.0 <sup>(h)</sup>	5.3	39.7
1944	3,683	3,664	7,347	83.7 <sup>(f)</sup>	-2.2 <sup>(g)</sup>	68	9.3	5,691	153	21.0	70 <sup>(h)</sup>	9.5 <sup>(h)</sup>	4.8	31.3
1945	3,722	3,708	7,430	90.3 <sup>(f)</sup>	-2.6 <sup>(g)</sup>	63	8.5	7,213	161	21.7	70 <sup>(h)</sup>	9.5 <sup>(h)</sup>	4.7	29.4
1946	3,767	3,751	7,518	101.7 <sup>(f)</sup>	-15.1 <sup>(g)</sup>	79	10.6	7,235	176	23.6	75 <sup>(h)</sup>	10.0 <sup>(h)</sup>	5.1	29.0
1947	3,828	3,810	7,638	108.9	10.6	76	10.1	8,803	182	24.1	73	9.7	5.2	28.5
1948	3,909	3,884	7,792	101.1	55.1	75	9.7	7,253	178	23.1	77	10.0	4.9	27.8
1949	4,047	3,998	8,046	106.0	150.0	73	9.2	6,626	181	22.9	75	9.5	4.6	25.3
1950	4,191	4,116	8,307	112.4	152.5	76	9.2	7,428	191	23.3	78	9.6	4.7	24.5
1951	4,311	4,217	8,528	111.5	111.4	77	9.2	7,330	193	23.0	82	9.7	4.9	25.2
1952	4,426	4,314	8,740	120.1	94.0	74	8.6	7,110	202	23.4	82	9.5	4.8	23.8
1953	4,503	4,399	8,903	122.0	42.9	71	8.0	8,043	202	22.9	80	9.1	4.7	23.3
1954	4,598	4,492	9,090	120.5	68.2	71	7.9	6,528	202	22.5	82	9.1	4.5	22.5
1955	4,714	4,598	9,312	125.6	97.3	72	7.8	6,782	208	22.6	82	8.9	4.6	22.0
1956	4,829	4,702	9,531	126.0	94.0	72	7.6	6,492	212	22.5	86	9.1	4.6	21.7
1957	4,930	4,814	9,744	135.4	78.7	74	7.6	6,374	220	22.9	85	8.8	4.7	21.4
1958	5,026	4,921	9,947	138.8	65.4	74	7.5	6,994	223	22.6	84	8.5	4.6	20.5
1959	5,132	5,029	10,161	137.8	76.8	74	7.4	7,370	227	22.6	89	8.9	4.9	21.5
1960	5,253	5,139	10,392	141.9	90.1	75	7.3	6,709	230	22.4	88	8.6	4.6	20.2
1961	(i)	(i)	(i)			77	7.3	6,751	240	22.8	89	8.5	4.7	19.5
1962	5,374	5,268	10,643	151.8	61.5	79	7.4	7,290	237	22.2	93	8.7	4.8	20.4
1963	5,572	5,484	11,055	141.3	71.6	81	7.4	7,515	236	21.6	95	8.7	4.6	19.5
1964	5,683	5,597	11,280	129.1	99.3	86	7.7	7,967	229	20.6	101	9.0	4.4	19.1
1965	5,794	5,712	11,505	123.7	104.9	94	8.2	8,534	223	19.6	100	8.8	4.1	18.5
1966	5,891	5,814	11,705	119.2	86.9	96	8.3	9,921	224	19.3	105	9.0	4.2	18.7
1967	5,992	5,920	11,912	126.6	91.9	100	8.5	9,747	229	19.4	103	8.7	4.2	18.3
1968	6,108	6,037	12,146	131.4	113.1	106	8.8	10,791	241	20.0	110	9.1	4.3	17.8
1969	6,238	6,169	12,407	143.7	129.0	112	9.2	10,984	250	20.4	106	8.7	4.5	17.9
1970	6,365	6,299	12,663	144.5	122.9	116	9.3	12,249	258	20.6	113	9.0	4.6	17.9
1971	6,484	6,424	12,908	165.7	84.6	118	9.2	13,002	276	21.6	111	8.7	4.8	17.3
1972	6,570	6,521	13,091	155.2	27.8	114	8.8	15,636	265	20.4	110	8.5	4.4	16.7

(a) At 31 December. (b) Excess of arrivals over departures. Minus sign (—) indicates excess of departures over arrivals. (c) Decrees made absolute, including decrees for nullity of marriage. (d) Number per 1,000 of mean population. (e) Number per 1,000 live births. (f) Excess of births over civilian deaths from September 1939 to June 1947. (g) Excludes movements of defence personnel from September 1939 to June 1947. (h) Excludes deaths of defence personnel from September 1939 to June 1947. (i) Includes Aborigines.

**PRIMARY INDUSTRIES**  
**AGRICULTURE**

Season	Wheat			Oats			Barley			Maize		
	Area	Yield	Average yield	Area	Yield	Average yield	Area	Yield	Average yield	Area	Yield	Average yield
	mil. acres	mil. bus	bus	'000 acres	mil. bus	bus	'000 acres	mil. bus	bus	'000 acres	mil. bus	bus
1901-02	5.1	39	7.5	461	9.8	21.2	75	1.5	20.4	295	7.0	23.9
1911-12	7.4	72	9.6	617	9.6	15.5	116	2.1	17.7	340	8.9	26.3
1921-22	9.7	129	13.3	733	12.1	16.6	299	6.1	20.4	305	7.8	25.7
1931-32	14.7	191	12.9	1,085	15.2	14.0	342	6.3	18.4	269	7.1	26.2
1941-42	12.0	167	13.9	1,460	22.3	15.3	784	18.0	23.0	301	7.4	24.7
1944-45	8.5	53	6.3	2,034	9.0	4.4	614	5.0	8.2	257	6.5	25.2
1945-46	11.4	142	12.5	1,949	25.8	13.2	699	11.1	15.9	236	5.7	24.3
1946-47	13.2	117	8.9	1,728	15.6	9.0	748	11.6	15.5	260	5.8	22.4
1947-48	13.9	220	15.9	2,105	40.7	19.3	839	20.9	24.9	223	6.2	27.7
1948-49	12.6	191	15.2	1,770	23.6	13.3	1,012	17.8	17.6	182	5.2	28.5
1949-50	12.2	218	17.8	1,748	27.4	15.7	1,040	19.5	18.8	194	6.0	31.0
1950-51	11.7	184	15.8	1,757	25.1	14.3	1,079	22.9	21.2	169	4.7	27.9
1951-52	10.4	160	15.4	2,365	34.5	14.6	1,118	21.9	19.6	170	4.0	23.7
1952-53	10.2	195	19.1	2,764	43.6	15.8	1,377	35.0	25.5	174	5.0	28.5
1953-54	10.8	198	18.4	2,137	33.0	15.4	1,803	41.3	22.9	179	5.1	28.4
1954-55	10.7	169	15.8	2,574	32.8	12.8	1,691	29.4	17.4	170	5.1	29.9
1955-56	10.2	195	19.2	3,354	56.5	16.8	1,894	41.7	22.0	167	4.8	28.4
1956-57	7.9	134	17.1	2,556	35.4	13.8	2,093	49.3	23.5	182	5.5	30.3
1957-58	8.8	98	11.0	2,959	31.4	10.6	2,121	30.5	14.4	184	5.6	30.6
1958-59	10.4	215	20.7	3,974	86.9	21.9	2,381	63.0	26.5	180	6.7	37.4
1959-60	12.2	199	16.3	3,030	46.8	15.5	2,379	34.2	14.3	185	6.7	36.4
1960-61	13.4	274	20.4	3,637	76.1	20.9	2,830	68.0	24.0	185	6.2	33.8
1961-62	14.7	247	16.8	3,097	55.1	17.8	2,383	41.5	17.4	211	7.3	34.7
1962-63	16.5	307	18.6	3,292	68.8	20.9	2,027	39.6	19.5	209	7.5	35.6
1963-64	16.5	328	19.9	3,392	68.2	20.1	2,013	43.4	21.6	215	6.7	31.3
1964-65	17.9	369	20.6	3,497	70.0	20.0	2,064	49.3	23.9	212	6.9	32.4
1965-66	17.5	260	14.8	3,768	60.7	16.1	2,298	41.8	18.2	197	4.9	25.0
1966-67	20.8	467	22.4	4,258	107.1	25.2	2,498	61.6	24.7	201	7.5	37.2
1967-68	22.4	277	12.4	3,380	39.6	11.7	2,611	36.8	14.1	200	7.1	35.6
1968-69	26.8	544	20.3	3,872	94.3	24.3	3,314	72.6	21.9	164	5.9	35.7
1969-70	23.4	388	16.5	3,396	68.7	20.2	3,759	74.9	19.9	197	7.5	38.3
1970-71	16.0	290	18.1	3,838	88.9	23.2	4,942	103.7	21.0	212	8.3	39.4
1971-72	17.6	313	17.7	3,066	70.3	22.9	6,265	135.2	21.6	193	8.4	43.6
1972-73p	18.8	236	12.6	2,459	40.6	16.5	5,288	87.3	16.5	147	5.5	37.4

AGRICULTURE—continued

Season	Hay			Potatoes			Sugar-cane(a)			Vineyards		All crops
	Area	Yield	Average yield	Area	Yield	Average yield	Area	Yield	Average yield	Area	Wine made	Area
	'000 acres	'000 tons	tons	'000 acres	'000 tons	tons	'000 acres	'000 tons	tons	'000 acres	mil. gal	mil. acres
1901-02	1,688	2,025	1.20	110	323	2.94	87	1,368	15.7	64	5.3	8.4
1911-12	2,518	2,868	1.14	130	301	2.31	101	1,682	16.7	61	5.0	12.1
1921-22	2,995	3,902	1.30	149	388	2.60	128	2,437	19.0	92	8.5	15.4
1931-32	2,635	3,167	1.20	145	397	2.74	242	4,213	17.4	115	14.2	21.2
1941-42	2,758	3,575	1.30	99	333	3.35	255	5,154	20.3	130	15.6	(b)20.5
1944-45	2,409	1,994	0.83	242	881	3.64	226	4,598	20.3	129	13.9	(b)17.7
1945-46	2,757	3,493	1.27	176	646	3.67	236	4,718	20.0	129	24.9	(b)20.6
1946-47	2,006	2,357	1.18	145	544	3.76	227	4,027	17.7	130	32.0	(b)21.3
1947-48	1,970	3,008	1.53	146	498	3.42	222	4,418	19.9	132	32.9	(b)22.5
1948-49	1,580	2,292	1.45	120	460	3.84	266	6,708	25.2	135	32.8	(b)20.9
1949-50	1,605	2,430	1.51	134	471	3.52	281	6,849	24.3	135	32.7	(b)20.8
1950-51	1,377	2,063	1.50	127	412	3.24	272	7,052	25.9	137	26.0	(b)20.1
1951-52	1,549	2,345	1.51	118	509	4.31	282	5,327	18.9	136	35.3	(b)20.0
1952-53	1,761	2,765	1.57	135	431	3.18	280	6,967	24.9	137	30.0	(b)20.7
1953-54	1,935	3,049	1.58	128	548	4.27	340	9,014	26.5	138	31.7	(b)21.5
1954-55	1,984	2,856	1.44	107	468	4.36	374	10,087	27.0	136	24.0	22.3
1955-56	2,241	3,625	1.62	94	402	4.29	373	8,901	23.9	135	22.9	23.0
1956-57	1,861	3,043	1.63	101	519	5.14	370	9,272	25.1	132	30.8	20.0
1957-58	2,237	2,969	1.33	118	575	4.88	376	9,249	24.6	131	33.9	22.2
1958-59	3,018	5,090	1.69	105	575	5.49	370	10,213	27.6	131	32.6	25.6
1959-60	2,105	3,177	1.51	108	579	5.34	314	9,002	28.7	130	28.4	26.1
1960-61	2,973	5,079	1.71	92	451	4.91	341	9,166	26.9	131	33.8	29.6
1961-62	2,274	3,693	1.62	94	526	5.57	387	9,577	24.8	133	41.8	29.6
1962-63	2,720	4,717	1.73	114	667	5.86	402	12,736	31.7	134	29.9	32.1
1963-64	2,602	4,269	1.64	102	562	5.51	418	12,118	29.0	136	37.8	32.0
1964-65	2,793	4,963	1.78	88	508	5.78	470	15,070	32.0	139	38.9	34.7
1965-66	2,780	4,179	1.50	96	639	6.63	503	14,155	28.1	140	34.3	34.5
1966-67	3,496	6,371	1.82	99	643	6.47	557	16,685	29.9	139	41.7	39.6
1967-68	1,240	1,226	0.99	106	658	6.23	553	16,756	30.3	140	44.4	36.0
1968-69	1,058	1,701	1.61	113	798	7.04	568	18,413	32.4	143	52.1	41.2
1969-70	1,058	1,490	1.41	107	750	7.00	526	15,535	29.5	150	63.1	38.9
1970-71	863	1,254	1.45	95	735	7.71	545	17,366	31.9	158	55.3	33.2
1971-72	843	1,227	1.46	100	809	8.10	578	19,084	33.0	164	62.9	35.3
1972-73p	1,120	1,205	1.08	91			614	18,630	30.3	170		35.6

(a) Cane cut for crushing.

(b) Excludes Northern Territory.

PRIMARY INDUSTRIES—continued  
PASTORAL, DAIRYING, ETC.

Year ended 30 June—	Livestock(a)				Meat(d)						Total meat
	Horses	Cattle	Sheep	Pigs	Wool (b)(c)	Butter	Cheese	Beef and veal	Mutton and lamb	Pigmeat	
	mil.	mil.	mil.	mil.	mil. lb	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
1902 . . .	1.6	8.5	72	0.9	539	(e)46	(e)5.3	n.a.	n.a.	n.a.	n.a.
1912 . . .	2.3	11.8	97	1.1	798	(e)95	(e)7.1	n.a.	n.a.	n.a.	n.a.
1922 . . .	2.4	14.4	86	1.0	723	(e)119	(e)14.6	339	218	50	608
1932 . . .	1.8	12.3	111	1.2	1,007	175	14.0	350	307	70	727
1942 . . .	1.6	13.6	125	1.4	1,167	168	30.1	534	372	122	1,027
1945 . . .	1.4	14.1	105	1.6	1,016	142	34.6	461	395	127	984
1946 . . .	1.3	13.9	96	1.4	936	150	41.2	407	291	108	805
1947 . . .	1.2	13.4	96	1.3	977	143	42.4	488	303	95	885
1948 . . .	1.2	13.8	103	1.3	1,005	162	41.5	562	295	90	947
1949 . . .	1.1	14.1	109	1.2	1,057	166	43.2	577	320	94	992
1950 . . .	1.1	14.6	113	1.1	1,142	174	44.8	607	358	90	1,055
1951 . . .	1.0	15.2	116	1.1	1,118	164	44.3	652	274	85	1,011
1952 . . .	0.9	14.9	118	1.0	1,080	135	40.6	582	282	85	949
1953 . . .	0.9	15.2	123	1.0	1,281	167	46.6	675	395	83	1,153
1954 . . .	0.8	15.6	127	1.2	1,245	160	49.1	704	365	84	1,153
1955 . . .	0.8	15.8	131	1.3	1,283	191	45.2	720	388	99	1,207
1956 . . .	0.8	16.5	139	1.2	1,417	209	38.7	751	380	94	1,225
1957 . . .	0.7	17.3	150	1.3	1,564	193	45.2	815	367	89	1,270
1958 . . .	0.7	16.9	149	1.4	1,434	176	36.0	791	421	102	1,315
1959 . . .	0.7	16.3	153	1.3	1,591	194	43.5	906	492	102	1,501
1960 . . .	0.6	16.5	155	1.4	1,680	198	44.9	752	573	101	1,426
1961 . . .	0.6	17.3	153	1.6	1,625	182	47.1	633	574	107	1,315
1962 . . .	0.6	18.0	158	1.7	1,699	199	55.7	791	587	120	1,498
1963 . . .	0.5	18.5	159	1.4	1,673	202	58.7	914	593	114	1,622
1964 . . .	0.5	19.1	165	1.5	1,785	204	58.2	985	586	111	1,683
1965 . . .	0.5	18.8	171	1.7	1,784	203	61.6	1,010	585	120	1,715
1966 . . .	n.a.	17.9	158	1.7	1,663	206	58.6	931	599	133	1,663
1967 . . .	0.5	18.3	164	1.8	1,762	218	68.7	865	587	140	1,591
1968 . . .	n.a.	19.2	167	2.1	1,770	193	69.4	890	654	147	1,691
1969 . . .	n.a.	20.6	175	2.3	1,948	196	73.6	920	669	160	1,749
1970 . . .	0.5	22.2	180	2.4	2,036	221	75.1	994	743	172	1,909
1971 . . .	n.a.	24.4	178	2.6	1,952	200	76.3	1,031	812	179	2,022
1972 . . .	n.a.	27.4	163	3.2	1,930	193	77.9	1,149	941	191	2,282
1973p . . .	n.a.	29.1	140	3.3	1,625	182	92.0	1,412	697	229	2,338

(a) At 31 December of previous year for years to 1942, at 31 March thereafter. (b) In terms of greasy. (c) 1901-02 and 1911-12, year ended previous December; then until 1946-47, year ended March; 1947-48 onwards, year ended June. (d) Carcass weight in terms of fresh meat. (e) Year ended previous December.

## MINERALS

## FORESTRY

Year ended 31 December—	Copper(a)				Iron ore		Crude oil	Year ended 30 June—	Sawn output of Aust. grown timber
	'000 tonnes	kilograms	'000 tonnes	'000 tonnes	mil. tonnes	mil. tonnes			
1901 . . .	29.9	102,642	n.a.	(b)	n.a.	7.0	..	1902 . . .	mil. super feet (c)452
1911 . . .	46.1	77,263	225.3	241.9	(b)	10.7	..	1912 . . .	(c)605
1921 . . .	11.2	23,577	82.3	141.7	0.7	13.1	..	1922 . . .	590
1931 . . .	13.9	18,510	150.8	75.4	(b)	10.8	..	1932 . . .	237
1941 . . .	22.7	46,553	295.7	251.2	2.5	19.1	..	1942 . . .	914
1944 . . .	30.3	20,431	191.9	176.5	2.4	19.0	..	1945 . . .	842
1945 . . .	26.5	20,442	164.9	152.7	1.6	18.5	..	1946 . . .	895
1946 . . .	19.1	25,644	184.3	174.8	1.9	19.9	..	1947 . . .	1,050
1947 . . .	14.2	29,164	196.0	185.4	2.2	21.3	..	1948 . . .	1,117
1948 . . .	12.8	27,542	213.6	193.8	2.1	21.8	..	1949 . . .	1,184
1949 . . .	14.0	27,653	215.2	194.7	1.5	21.8	..	1950 . . .	1,223
1950 . . .	17.9	27,046	229.0	201.0	2.4	24.3	..	1951 . . .	1,261
1951 . . .	18.4	27,855	215.4	192.3	2.5	25.9	..	1952 . . .	1,393
1952 . . .	19.2	30,495	232.0	199.6	2.9	27.9	..	1953 . . .	1,340
1953 . . .	38.1	33,442	273.7	243.2	3.3	27.1	..	1954 . . .	1,400
1954 . . .	42.6	34,766	289.4	256.7	3.6	29.6	..	1955 . . .	1,449
1955 . . .	48.1	32,629	300.7	260.7	3.6	29.9	..	1956 . . .	1,451
1956 . . .	55.4	32,031	304.3	282.5	4.0	30.3	..	1957 . . .	1,419
1957 . . .	60.2	33,714	339.1	324.0	3.9	31.2	..	1958 . . .	1,391
1958 . . .	76.9	34,338	333.6	298.4	4.0	32.6	..	1959 . . .	1,460
1959 . . .	96.5	33,751	321.4	279.8	4.2	33.9	..	1960 . . .	1,521
1960 . . .	111.2	33,800	313.1	322.6	4.4	38.1	..	1961 . . .	1,418
1961 . . .	97.2	33,476	274.0	316.2	5.4	40.9	..	1962 . . .	1,352
1962 . . .	108.7	33,245	276.0	342.9	4.9	42.3	..	1963 . . .	1,416
1963 . . .	114.8	31,849	416.9	357.1	5.6	44.0	..	1964 . . .	1,487
1964 . . .	105.7	29,979	380.9	350.1	5.8	47.2	198	1965 . . .	1,532
1965 . . .	91.8	27,298	367.9	354.8	6.8	52.9	417	1966 . . .	1,508
1966 . . .	111.3	28,521	370.8	375.3	11.1	56.0	539	1967 . . .	1,461
1967 . . .	91.8	25,049	381.8	407.0	17.3	59.0	1,208	1968 . . .	1,473
1968 . . .	109.6	24,316	388.8	422.4	26.6	64.2	2,206	1969 . . .	(d)1,409
1969(e) . . .	125.3	22,713	417.7	444.4	32.5	66.8	2,238	1970 . . .	(d)1,435
1970(e) . . .	142.3	20,496	459.4	502.0	45.1	72.8	4,872	1971p . . .	1,457
1971(e) . . .	173.0	19,013	416.4	444.1	57.1	72.9	14,937	1972 . . .	1,426
1972(e) . . .	171.9	23,252	420.8	497.5	62.1	77.2	19,038	1973p . . .	1,518
1973(e) . . .	192.1	20,845	386.5	486.7	71.9	83.9	20,568		

(a) Metallic content of minerals produced. (b) Less than 0.05. (c) Year ended previous December. (d) Excludes estimated quantity of timber from logs peeled or sliced for veneers. (e) Year ended 30 June.



## SECONDARY INDUSTRIES

## FACORIES(a)

Year ended 30 June—	Net value of production(d)										Value of	
	Number	Persons employed (b)	Salaries and wages paid(c)	Chemicals, etc.	Industrial metals, etc.	Textiles etc.	Clothing	Food etc.	Paper, etc.	All groups	Plant and machinery(e)	Land and buildings(e)
	'000 (g)	'000 (g)	\$m (g)	\$m n.a.	\$m n.a.	\$m n.a.	\$m n.a.	\$m n.a.	\$m n.a.	\$m 58.2	\$m n.a.	\$m n.a.
1902(f).												
1912(f).	14.5	312	55	2.2	24.1	15.0		23.6	8.5	108.3	63.2	65.0
1922	18.0	379	136	6.4	47.2	38.4		54.4	18.0	225.0	156.2	134.6
1932	21.7	337	112	15.8	45.6	13.8	22.2	57.4	19.2	222.0	243.1	213.2
1942	27.0	725	360	59.6	239.8	42.0	47.2	106.4	34.2	633.0	338.4	312.7
1947	34.8	805	474	49.0	292.8	53.9	73.7	138.3	52.2	821.7	379.4	386.9
1948	37.4	849	572	57.3	362.6	64.2	86.7	156.3	59.2	978.6	427.4	422.3
1949	40.1	890	678	67.1	421.7	71.7	104.5	179.6	70.6	1,137.5	493.0	465.5
1950	41.6	917	772	81.3	422.5	85.9	115.4	202.0	86.0	1,323.1	571.2	519.1
1951	43.1	969	983	105.4	654.0	109.2	143.5	236.6	109.5	1,687.7	673.2	605.6
1952	45.8	978	1,224	127.4	826.2	113.2	162.2	282.2	136.4	2,049.7	820.3	719.0
1953	47.7	933	1,270	135.7	842.6	129.7	165.6	328.7	136.6	2,165.7	987.1	828.9
1954	49.6	990	1,410	164.6	936.6	157.1	187.1	355.8	198.6	2,454.1	1,161.4	966.9
1955	51.1	1,031	1,563	196.3	1,065.9	156.8	196.8	373.1	181.1	2,731.0	1,396.6	1,112.0
1956	52.4	1,060	1,707	238.3	1,193.9	163.6	204.9	395.6	198.1	3,001.4	1,595.7	1,307.1
1957	53.2	1,063	1,782	273.8	1,281.7	182.9	211.0	428.9	217.4	3,244.2	1,834.1	1,519.4
1958	54.0	1,074	1,859	291.3	1,389.0	183.0	216.1	449.9	241.4	3,457.4	2,025.5	1,698.1
1959	54.9	1,088	1,941	322.4	1,471.6	191.3	221.5	469.1	263.4	3,685.2	2,216.8	1,895.8
1960	56.7	1,132	2,173	360.3	1,700.4	216.7	237.7	520.1	298.2	4,161.1	2,443.2	2,129.2
1961	57.8	1,145	2,289	366.1	1,795.9	213.6	247.2	542.5	318.6	4,349.8	2,785.6	2,389.1
1962	58.5	1,121	2,287	364.3	1,770.3	211.2	252.4	495.5	326.9	4,394.6	3,052.1	2,809.6
1963	59.1	1,168	2,447	411.4	1,954.7	233.8	266.3	636.9	350.9	4,795.2	3,286.5	3,006.8
1964	59.4	1,210	2,652	449.5	2,174.0	252.5	281.4	700.5	379.7	5,270.0	3,480.7	3,204.7
1965	61.0	1,269	2,994	504.8	2,486.1	279.6	302.3	757.1	426.9	5,896.8	3,766.3	3,505.9
1966	61.7	1,294	3,163	542.7	2,647.8	282.8	319.0	818.3	459.5	6,251.9	4,154.7	3,776.6
1967	62.5	1,309	3,408	627.6	2,912.9	303.1	341.5	892.3	503.3	6,877.0	4,706.8	4,061.2
1968	63.0	1,331	3,666	687.0	3,163.6	315.0	360.1	937.5	549.0	7,430.9	4,962.2	4,303.2
1969(h)	35.9	1,264	3,908	633.0	3,201.6	301.0	409.2	1,182.4	620.7	7,475.0	n.a.	n.a.
1970	35.7	1,297	4,329	692.3	3,552.6	311.1	452.6	1,316.8	699.1	8,267.0	n.a.	n.a.
1972	36.2	1,308	5,243	841.0	4,050.0	336.0	517.0	1,644.0	820.0	9,706.0	n.a.	n.a.

(a) Excludes Northern Territory and Australian Capital Territory before 1 July 1964. (b) Average over whole year; includes working proprietors. (c) Excludes amounts drawn by working proprietors. (d) Value added in process of manufacture (i.e. value of output less value of materials and fuel used). (e) Depreciated or book value at end of year, including estimated value of rented premises and machinery. (f) Year ended previous December. (g) Owing to variation in classification, effective comparison is not possible. (h) Direct comparisons with figures for previous years are not possible (for details, see page 729).

## PRIMARY AND SECONDARY INDUSTRIES

## NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES(a)

Year ended 30 June—	Crop pro- duction	Pastoral	Dairying	Poultry	Bee- farming	Total Agri- culture	Hunting	Forestry
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1902	47.6	54.4	15.2	4.0	0.2	121.4	n.a.	(b) 5.6
1912	77.6	105.4	32.2	8.0	0.2	223.4	n.a.	9.6
1922	163.8	150.2	70.6	18.0	0.2	402.8	n.a.	18.2
1932	99.4	86.0	45.2	11.4	0.2	242.2	3.0	7.8
1942	128.0	170.8	68.6	13.0	0.8	381.2	10.0	20.4
1945	140.7	196.9	92.4	29.6	1.0	460.6	12.4	23.1
1946	219.1	172.6	99.1	30.3	0.8	521.8	17.1	25.1
1947	206.5	260.4	99.7	29.4	1.7	597.7	18.8	29.4
1948	451.6	387.7	121.1	33.5	1.5	995.4	14.6	35.5
1949	328.7	481.7	135.1	40.4	3.0	989.0	15.6	40.6
1950	437.4	674.2	162.2	44.5	1.5	1,319.8	11.4	46.4
1951	416.3	1,409.6	178.7	49.2	1.7	2,055.5	13.3	56.9
1952	493.4	801.0	207.6	63.1	1.5	1,566.6	13.4	75.8
1953	552.8	987.5	271.5	70.4	2.1	1,884.3	11.2	80.1
1954	536.9	983.4	273.9	69.6	2.9	1,866.7	10.1	88.0
1955	487.8	922.9	271.6	59.6	2.8	1,744.7	9.9	93.2
1956	558.9	893.6	309.8	60.4	3.5	1,826.2	12.1	103.6
1957	509.7	1,195.4	281.6	56.8	4.5	2,048.0	12.0	108.3
1958	489.1	894.5	255.2	54.7	3.1	1,696.6	12.1	106.9
1959	637.9	887.2	283.9	54.7	3.2	1,886.9	12.7	108.7
1960	583.9	1,072.4	304.4	60.8	4.1	2,025.7	13.8	102.7
1961	783.7	916.3	284.3	62.0	2.9	2,049.2	13.2	99.0
1962	733.0	962.7	273.0	49.7	3.2	2,021.6	11.8	92.3
1963	830.4	1,057.2	307.4	52.8	3.0	2,250.8	11.4	93.5
1964	917.4	1,316.0	330.2	61.5	5.1	2,630.3	13.4	99.1
1965	975.2	1,194.4	360.7	50.9	4.1	2,585.4	13.1	107.4
1966	857.9	1,159.5	349.9	62.6	3.5	2,433.4	13.8	110.8
1967	1,209.0	1,181.8	371.9	67.2	3.3	2,833.3	11.9	108.7
1968	899.4	1,044.4	371.3	61.2	3.8	2,380.2	10.5	109.8
1969	1,208.9	1,195.0	381.2	68.4	2.6	2,856.1	10.6	110.3
1970	1,010.4	1,204.4	419.5	81.4	4.4	2,720.1	11.2	117.8
1971	1,071.2	1,001.1	438.5	83.3	4.2	2,598.3	9.0	129.0
1972	1,157.4	1,210.3	465.7	79.7	6.0	2,919.2	9.1	139.3

(a) Gross value, 1901 to 1921-22. Before 1922, year ended previous December. (b) Includes Fisheries.

**PRIMARY AND SECONDARY INDUSTRIES—continued**      **BUILDING**  
**NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES(a)—continued**

Year ended 30 June—	Total primary excluding mining		Mining and quarrying	Factories	Grand total	New houses and flats completed(b)		Value of work done on all new buildings(c)
	Fishing					number	Value	
	\$m	\$m	\$m	\$m	\$m	'000	\$m	\$m
1902 . . . . .	(d)	127.0	44.0	(e)58.2	229.2	n.a.	n.a.	n.a.
1912 . . . . .	2.2	235.2	46.6	(e)108.3	390.1	n.a.	n.a.	n.a.
1922 . . . . .	2.8	423.8	40.0	225.0	688.8	n.a.	n.a.	n.a.
1932 . . . . .	2.8	255.8	27.0	220.0	504.8	n.a.	n.a.	n.a.
1942 . . . . .	3.6	415.2	66.8	633.0	1,115.0	n.a.	n.a.	n.a.
1945 . . . . .	4.5	500.6	53.7	724.6	1,278.8	n.a.	n.a.	n.a.
1946 . . . . .	5.2	569.2	52.5	704.6	1,326.4	15.4	29.0	n.a.
1947 . . . . .	6.6	652.5	65.0	821.7	1,539.2	32.9	72.1	n.a.
1948 . . . . .	7.0	1,052.5	85.2	978.6	2,116.3	44.3	108.6	n.a.
1949 . . . . .	8.3	1,053.5	96.7	1,137.5	2,287.7	52.7	150.9	n.a.
1950 . . . . .	8.5	1,386.1	104.7	1,323.1	2,813.8	57.0	184.7	n.a.
1951 . . . . .	9.7	2,135.4	142.3	1,687.7	3,965.4	69.3	255.6	n.a.
1952 . . . . .	11.5	1,667.3	194.4	2,049.7	3,911.4	80.1	354.1	n.a.
1953 . . . . .	13.8	1,989.4	219.3	2,165.7	4,374.5	80.2	394.5	n.a.
1954 . . . . .	15.5	1,980.3	209.8	2,454.1	4,644.2	77.6	398.2	n.a.
1955 . . . . .	17.5	1,865.3	236.2	2,731.0	4,832.5	82.1	444.2	n.a.
1956 . . . . .	17.8	1,959.7	265.0	3,001.4	5,226.1	78.5	452.5	n.a.
1957 . . . . .	21.0	2,189.3	280.0	3,244.2	5,713.5	68.4	419.5	n.a.
1958 . . . . .	20.8	1,836.4	253.6	3,457.4	5,547.4	74.6	463.0	811.6
1959 . . . . .	22.5	2,030.8	236.7	3,685.2	5,952.7	84.2	527.3	864.9
1960 . . . . .	24.7	2,166.9	252.3	4,161.1	6,580.2	90.0	571.0	1,001.6
1961 . . . . .	25.6	2,187.0	278.1	4,349.8	6,815.0	94.5	627.4	1,130.8
1962 . . . . .	28.6	2,154.3	274.5	4,394.6	6,823.5	86.3	593.2	1,076.9
1963 . . . . .	30.6	2,386.3	291.0	4,795.2	7,472.6	87.7	610.2	1,140.7
1964 . . . . .	31.7	2,774.5	327.7	5,270.0	8,372.1	96.7	685.8	1,323.9
1965 . . . . .	38.7	2,744.6	400.1	5,896.8	9,041.4	112.7	823.0	1,555.9
1966 . . . . .	41.7	2,599.7	443.9	6,251.9	9,295.7	112.8	869.9	1,681.2
1967 . . . . .	44.6	2,998.5	515.5	6,877.0	10,390.8	111.9	914.8	1,745.4
1968 . . . . .	54.0	2,554.5	568.1	7,430.9	10,553.5	120.2	1,022.8	1,914.3
1969 . . . . .	58.7	3,035.6	(f)749.2	(f)7,473.5		130.7	1,182.1	2,195.4
1970 . . . . .	58.5	2,912.3	(f)1,042.6	(f)8,263.7		142.2	1,379.4	2,556.7
1971 . . . . .	72.6	2,808.9	(f)1,289.5	(f)9,703.2		141.4	1,466.0	2,815.6
1972 . . . . .	83.4	3,151.1	(f)1,434.3			142.8	1,609.2	3,132.4
1973 . . . . .						149.1	1,822.2	3,542.4

(a) Gross value, 1901 to 1921–22. Before 1922, year ended previous December. (b) Series commenced 1945–46. Partly estimated before July 1951, and excludes Northern Territory before July 1954. (c) Building by private contractors, government authorities and owner builders. (d) Included in Forestry. (e) Year ended previous December. (f) Value added from 1968–69.

**WAGES AND PRICES**

Year ended 31 December—	Retail price index numbers, six State capital cities combined(b)		Year ended 31 December—	Retail price index numbers, six State capital cities combined(b)	
	Weekly wage rates index adult males(a)			Weekly wage rates index adult males(a)	
1901 . . . . .	n.a.	88	1955 . . . . .	105.2	394
1911 . . . . .	n.a.	100	1956 . . . . .	110.8	419
1921 . . . . .	n.a.	(c)168	1957 . . . . .	112.4	429
1931 . . . . .	n.a.	145	1958 . . . . .	114.3	435
1941 . . . . .	38.5	167	1959 . . . . .	122.0	443
1942 . . . . .	41.6	181	1960 . . . . .	125.7	459
1943 . . . . .	42.5	188	1961 . . . . .	129.5	471
1944 . . . . .	42.6	187	1962 . . . . .	129.8	469
1945 . . . . .	42.7	187	1963 . . . . .	133.0	472
1946 . . . . .	45.7	190	1964 . . . . .	140.4	483
1947 . . . . .	49.8	198	1965 . . . . .	144.3	502
1948 . . . . .	55.4	218	1966 . . . . .	152.4	517
1949 . . . . .	59.7	240	1967 . . . . .	159.3	534
1950 . . . . .	71.5	262	1968 . . . . .	173.4	548
1951 . . . . .	85.8	313	1969 . . . . .	183.6	564
1952 . . . . .	96.7	367	1970 . . . . .	191.9	586
1953 . . . . .	99.2	383	1971 . . . . .	218.0	621
1954 . . . . .	101.6	386	1972 . . . . .	238.2p	658

(a) At 31 December. Base: year 1954 = 100, weighted average. Excludes rural industry. (b) Base: year 1911 = 100. The index numbers are presented as a continuous series, but they give only a broad indication of long-term trends in retail price levels. They are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are: from 1901 to 1914, the 'A' Series Retail Price Index; from 1914 to 1946–47, the 'C' Series Retail Price Index; from 1946–47 to 1948–49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series Index excluding Rent; and from 1948–49 onwards, the Consumer Price Index. (c) November.

## STATISTICAL SUMMARY: AUSTRALIA

## OVERSEAS TRADE

## TOTALS

## PRINCIPAL EXPORTS(a)

Year ended 30 June—	TOTALS		PRINCIPAL EXPORTS(a)					
	Imports	Exports	Wool		Wheat		Flour(b)	
			Quantity	Value	Quantity	Value	Quantity	Value
	\$m	\$m	mil. kg	\$m	'000 tonnes	\$m	'000 tonnes	\$m
	f.o.b.	f.o.b.	(c)	f.o.b.		f.o.b.		f.o.b.
1902(d)	76	100	175.8	30	552	12.8	88	1.2
1912(d)	122	158	330.3	52	887	5.6	160	2.8
1922	188	256	440.6	96	2,720	37.2	327	11.0
1932	104	216	427.1	74	3,468	38.4	554	7.6
1942	348	338	426.3	112	608	9.2	376	8.4
1945	430	311	310.0	92	882	19.5	508	13.5
1946	358	447	422.3	132	339	12.4	471	22.7
1947	419	618	659.8	244	331	12.7	694	45.1
1948	679	820	513.9	289	1,638	105.6	711	63.6
1949	830	1,085	601.0	454	2,260	129.4	776	67.4
1950	1,076	1,227	647.5	618	2,135	124.3	700	52.7
1951	1,488	1,964	541.5	1,253	2,346	148.3	801	65.8
1952	2,107	1,350	472.3	636	1,712	110.6	716	66.0
1953	1,028	1,743	547.8	788	1,620	103.9	789	74.8
1954	1,363	1,657	547.0	805	982	61.9	690	59.4
1955	1,687	1,548	536.5	693	1,718	90.4	595	40.6
1956	1,642	1,564	587.8	653	1,934	92.9	605	39.4
1957	1,438	1,986	658.1	930	2,479	120.1	680	43.3
1958	1,584	1,636	603.2	720	1,077	57.0	417	28.7
1959	1,593	1,623	657.1	578	1,486	76.8	406	26.7
1960	1,854	1,875	722.4	742	2,483	123.4	486	30.3
1961	2,175	1,938	706.6	649	4,164	204.9	597	38.0
1962	1,769	2,155	738.8	720	5,529	284.9	525	34.8
1963	2,163	2,152	723.2	733	4,136	216.9	475	31.4
1964	2,373	2,782	757.3	926	6,905	362.0	621	42.2
1965	2,905	2,651	728.2	781	5,714	297.2	519	37.3
1966	2,939	2,721	726.4	757	5,156	264.1	354	24.8
1967	3,045	3,024	740.3	840	6,506	361.2	324	23.1
1968	3,264	3,045	763.4	739	6,498	342.7	346	23.5
1969	3,469	3,374	798.6	827	4,891	258.3	318	21.8
1970	3,881	4,135	854.2	803	6,885	337.6	299	21.2
1971	4,150	4,375	781.0	575	9,075	433.0	278	19.6
1972	4,008	4,896	845.0	582	8,459	418.5	164	12.6
1973	4,120	6,220	737.0	1,238	5,412	274.3	142	12.1

(a) Australian produce. (b) Flour, plain white. (c) Greasy equivalent (includes greasy wool, slipe, wool scoured and carbonised, wool exported on skins). (d) Year ended previous December.

## PRINCIPAL EXPORTS(a)—continued

Year ended 30 June—	Butter(b)		Hides and skins		Meats(c)		Fruit(d)		Sugar		Gold		Ores and concentrates	
	Quantity	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
	mil. kg	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.
1902(e)	16	2.8	2.6	5.2	0.4	(f)	(f)	(f)	28.6	..	(f)	..	(f)	..
1912(e)	46	9.2	6.4	8.6	1.0	(f)	(f)	(f)	24.0	..	..	..	8.1	..
1922	58	10.0	6.2	11.0	6.0	(f)	(f)	(f)	7.0	..	..	..	1.3	..
1932	92	20.6	4.6	12.8	9.6	5.0	23.8	..	0.3	..	..	..	0.3	..
1942	59	16.5	12.0	28.2	10.6	5.2	18.4	..	1.9	..	..	..	1.9	..
1945	43	16.5	13.2	28.2	11.0	3.7	(f)	..	3.4	..	..	..	3.4	..
1946	63	24.8	23.7	28.0	12.2	6.1	52.8	..	3.2	..	..	..	3.2	..
1947	61	25.4	30.9	42.3	19.7	5.4	(f)	..	5.6	..	..	..	5.6	..
1948	85	41.8	24.7	45.1	25.5	6.1	7.7	..	9.2	..	..	..	9.2	..
1949	84	48.3	24.4	59.5	30.3	26.4	(f)	..	11.8	..	..	..	11.8	..
1950	83	50.8	30.3	70.0	30.2	28.3	(f)	..	12.3	..	..	..	12.3	..
1951	56	37.8	54.4	60.8	37.6	29.6	(f)	..	21.4	..	..	..	21.4	..
1952	13	10.2	34.3	71.0	44.4	13.8	14.0	..	39.9	..	..	..	39.9	..
1953	51	40.9	40.3	131.6	61.2	43.3	40.8	..	38.9	..	..	..	38.9	..
1954	41	33.1	38.9	113.8	67.9	63.2	27.5	..	25.6	..	..	..	25.6	..
1955	64	50.0	39.4	127.0	68.0	62.3	27.4	..	28.1	..	..	..	28.1	..
1956	84	58.7	41.8	119.1	67.4	49.4	16.6	..	38.2	..	..	..	38.2	..
1957	79	52.9	48.5	100.1	52.9	57.6	28.5	..	51.4	..	..	..	51.4	..
1958	53	32.3	50.8	110.5	72.0	70.0	12.7	..	42.4	..	..	..	42.4	..
1959	80	50.9	47.1	194.4	73.1	64.3	6.6	..	32.7	..	..	..	32.7	..
1960	79	58.4	63.6	177.0	64.3	53.3	20.4	..	43.5	..	..	..	43.5	..
1961	64	40.9	54.4	144.6	61.1	70.1	79.9	..	54.4	..	..	..	54.4	..
1962	81	48.5	64.3	179.4	73.5	67.8	18.0	..	47.7	..	..	..	47.7	..
1963	81	49.3	73.7	225.7	73.3	91.0	12.9	..	43.5	..	..	..	43.5	..
1964	92	57.0	91.7	243.7	92.3	156.5	14.3	..	54.4	..	..	..	54.4	..
1965	97	67.4	80.1	286.2	86.1	112.7	18.4	..	76.6	..	..	..	76.6	..
1966	84	57.7	89.2	287.7	107.3	93.9	24.4	..	87.5	..	..	..	87.5	..
1967	104	64.8	86.3	285.5	94.5	100.0	18.1	..	100.3	..	..	..	100.3	..
1968	78	47.0	62.3	284.6	104.9	97.6	15.4	..	122.7	..	..	..	122.7	..
1969	75	40.5	75.3	291.2	92.4	122.2	22.7	..	142.9	..	..	..	142.9	..
1970	99	52.5	87.5	426.1	87.7	116.1	29.4	..	204.9	..	..	..	204.9	..
1971	89	48.1	71.3	438.4	99.8	149.6	18.1	..	230.8	..	..	..	230.8	..
1972	57	48.9	80.5	569.4	89.4	210.6	19.1	..	225.5	..	..	..	225.5	..
1973	76	62.0	189.1	869.9	116.9	249.8	24.8	..	232.4	..	..	..	232.4	..

(a) Australian produce. (b) Includes concentrates and ghee. (c) Includes sausage casings, natural. (d) Includes juices and fruit preparations. (e) Year ended previous December. (f) Less than \$0.05m.



OVERSEAS TRADE—continued  
PRINCIPAL IMPORTS

Year ended 30 June—			<i>Vegetable foodstuffs, etc.</i>	<i>Apparel, etc.</i>	<i>Oil, etc.</i>	<i>Metals, etc.</i>	<i>Rubber</i>	<i>Paper, etc.</i>		
			\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.		
1902(a)	.	.	7.2	21.8	2.4	15.6	1.0	3.2		
1912(a)	.	.	7.4	32.4	3.2	28.0	2.8	5.2		
1922	.	.	8.0	62.0	9.4	45.6	3.4	8.8		
1932	.	.	5.2	30.8	11.0	14.8	1.6	8.8		
1942	.	.	12.3	65.3	32.4	143.6	6.0	8.7		
1944	.	.	10.5	77.2	47.5	215.4	6.0	11.8		
1945	.	.	13.0	90.7	41.3	150.4	3.5	14.8		
1946	.	.	17.6	63.4	41.5	92.5	5.9	16.3		
1947	.	.	18.9	97.8	41.3	105.2	10.9	26.8		
1948	.	.	33.0	192.1	69.5	170.8	9.8	46.8		
1949	.	.	27.9	218.4	86.4	256.1	12.6	42.1		
1950	.	.	41.4	199.5	104.8	454.7	21.4	37.8		
1951	.	.	49.6	277.3	139.7	479.7	59.3	58.0		
1952	.	.	50.1	407.1	174.9	786.8	68.0	137.5		
1953	.	.	37.0	96.5	148.5	452.0	17.4	44.9		
1954	.	.	51.4	227.6	167.0	504.4	23.7	68.2		
1955	.	.	71.9	253.5	193.8	638.3	34.1	92.8		
1956	.	.	44.1	222.7	199.3	644.1	44.1	87.2		
1957	.	.	51.6	182.7	191.1	530.1	33.4	83.5		
1958	.	.	51.5	217.0	203.4	564.4	33.3	89.8		
1959	.	.	55.3	193.9	209.0	585.6	33.6	96.1		
1960	.	.	54.9	222.1	213.5	710.1	48.5	103.8		
1961	.	.	60.5	264.9	223.3	871.3	47.3	133.8		
1962	.	.	56.3	208.4	219.8	630.3	35.5	109.6		
1963	.	.	55.5	233.3	246.3	850.0	46.7	133.5		
1964	.	.	61.6	234.0	251.5	947.1	51.2	141.7		
1965	.	.	66.2	272.1	260.1	1,275.2	66.3	156.5		

Year ended 30 June—		<i>Food and live animals</i>	<i>Beverages and tobacco</i>	<i>Crude materials, inedible, except fuels</i>	<i>Mineral fuels, lubricants and related materials</i>	<i>Animal and vegetable oils and fats</i>	<i>Chemicals</i>	<i>Manu- factured goods classified chiefly by materials</i>	<i>Machinery and transport equipment</i>	<i>Miscel- laneous manu- factured articles</i>	<i>Com- modities and trans- actions of merchan- dise trade not elsewhere classified</i>
		\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.
1966	.	110	37	197	252	15	266	590	1,121	220	90
1967	.	118	38	206	247	15	297	586	1,144	243	110
1968	.	117	36	224	241	14	309	644	1,250	270	111
1969	.	128	44	228	252	13	328	688	1,328	298	116
1970	.	140	48	247	255	16	363	753	1,528	350	124
1971	.	158	50	235	190	18	410	867	1,644	403	125
1972	.	160	51	219	194	15	410	856	1,483	432	137
1973	.	163	52	268	175	13	424	893	1,489	475	118

(a) Year ended previous December.

TRANSPORT AND COMMUNICATION  
SHIPPING

Year ended 30 June	Overseas vessels				Interstate vessels—			
	Entrances		Clearances		Overseas cargo		entrances	
	No.	Net tonnage	No.	Net tonnage	Discharged	Shipped	No.	Net tonnage
		mil. tons		mil. tons	mil. tons	mil. tons		mil. tons
1902 . . .	(b)	(b)	(b)	(b)	n.a.	n.a.	n.a.	n.a.
1912 . . .	(c)2,081	(c)5.0	(c)2,093	(c)5.0	n.a.	n.a.	(c)5,000	(c)6.8
1922 . . .	1,567	4.6	1,544	4.5	2.4	5.8	4,897	6.4
1932 . . .	1,519	5.7	1,538	5.7	3.0	6.7	3,958	5.5
1942 . . .	1,276	5.2	1,268	5.6	5.5	4.2	4,860	6.6
1945 . . .	1,059	4.5	1,088	4.6	6.1	4.9	3,543	5.1
1946 . . .	1,146	5.3	1,225	5.4	6.2	3.9	3,108	4.4
1947 . . .	1,202	5.2	1,287	5.2	5.6	4.5	3,084	4.7
1948 . . .	1,470	6.1	1,479	5.8	6.9	5.8	2,943	4.2
1949 . . .	1,706	7.5	1,780	7.5	8.4	6.8	3,091	4.7
1950 . . .	1,942	8.7	1,965	8.7	11.3	6.4	3,228	5.3
1951 . . .	1,911	8.6	1,992	8.7	13.1	6.7	3,301	5.8
1952 . . .	2,038	9.0	2,098	9.3	14.4	5.7	3,750	7.9
1953 . . .	1,988	8.7	2,053	8.9	9.7	7.5	4,555	9.2
1954 . . .	2,054	8.9	2,073	8.9	11.3	7.1	4,759	9.6
1955 . . .	2,245	9.9	2,260	10.1	14.4	7.5	4,644	9.4
1956 . . .	2,425	11.2	2,457	11.1	15.9	8.2	4,626	9.5
1957 . . .	2,628	11.8	2,662	11.8	15.3	10.1	4,805	9.5
1958 . . .	2,656	12.4	2,598	12.1	16.6	8.9	5,127	9.8
1959 . . .	2,706	12.9	2,757	13.1	16.9	10.1	5,012	9.5
1960 . . .	2,976	14.5	2,969	14.4	18.7	11.6	5,004	9.5
1961 . . .	3,382	17.3	3,396	17.0	21.1	15.3	4,860	9.6
1962 . . .	3,599	18.9	3,611	18.8	20.3	18.7	5,032	9.8
1963 . . .	3,411	19.0	3,351	18.6	22.8	17.0	4,845	9.7
1964 . . .	3,714	20.7	3,763	20.9	24.7	21.6	5,067	10.1
1965 . . .	3,813	21.7	3,788	21.7	27.7	22.4	5,263	13.2
1966 . . .	3,929	23.0	4,029	23.3	28.3	23.8	5,480	15.1
1967 . . .	3,977	27.4	4,017	27.6	31.3	34.6	4,937	15.3
1968 . . .	3,972	30.1	4,013	30.3	32.3	43.4	5,159	15.7
1969 . . .	4,390	36.4	4,360	36.2	34.5	57.0	5,269	15.8
1970 . . .	4,971	44.5	5,053	44.6	33.4	79.0	4,834	17.7
1971 . . .	5,476	50.8	5,578	51.4	26.5	102.8	4,967	23.7
1972 . . .	5,439	53.1	5,447	53.5	24.4	109.1	5,491	27.0

(a) Tons weight plus tons measurement. (b) Separate details not available. Total entrances and clearances for year ended December 1901, 4,028 vessels, 6.5 million tons. (c) Year ended previous December.

## GOVERNMENT RAILWAYS(a)

## REGULAR INTERNAL AIR SERVICES

Year ended 30 June—	Route-miles (b)	Train mileage	Pas-senger journeys	Freight-tons carried	Freight-net ton-miles	Passengers		Freight		Mail	
						Miles flown	Embark-ations	Pas-senger miles	Tons up-lifted	Ton-miles	Tons up-lifted
1902 . . .	12.8	38.2	mil.	mil.	mil.	mil.	'000	mil.	'000(c)	mil.(d)	'000(c)
1912 . . .	16.8	55.2	115	15.5	n.a.	..	..	..	..	..	..
1922 . . .	23.4	56.1	228	25.5	n.a.	..	..	..	..	..	..
1932 . . .	27.0	63.8	335	31.5	n.a.	..	..	..	..	..	..
1942 . . .	27.2	88.5	475	26.1	n.a.	0.9	6	3	0.04	n.a.	0.02
1945 . . .	27.2	90.2	535	38.9	n.a.	7.8	151	76	1.3	1.0	n.a.
1946 . . .	27.2	86.7	546	40.8	n.a.	12.6	320	141	2.6	1.3	4.2
1947 . . .	27.2	85.5	503	36.7	n.a.	17.7	509	225	5.6	2.6	2.4
1948 . . .	27.1	87.7	511	37.8	5,605	32.0	850	366	13.7	6.7	1.3
1949 . . .	27.0	92.3	507	40.0	5,934	32.4	1,208	503	28.9	13.4	1.4
1950 . . .	27.0	93.4	505	41.4	6,212	35.2	1,409	566	37.4	17.1	1.8
1951 . . .	27.0	88.7	476	40.6	6,203	36.5	1,500	590	49.4	22.3	2.9
1952 . . .	26.8	93.4	501	44.3	6,277	40.7	1,685	669	59.4	27.1	3.2
1953 . . .	26.8	88.7	498	44.0	6,755	41.8	1,829	722	57.5	26.7	2.7
1954 . . .	26.6	93.5	511	46.8	6,574	39.1	1,706	667	57.6	27.2	2.3
1955 . . .	26.6	94.8	517	47.7	6,953	41.0	1,772	702	69.5	32.7	2.3
1956 . . .	26.5	96.2	515	46.8	7,295	43.5	1,918	766	78.7	37.0	2.3
1957 . . .	26.5	95.1	499	47.5	7,274	43.7	2,020	828	84.4	38.9	2.5
1958 . . .	26.4	90.3	494	45.3	7,463	42.1	2,125	891	75.1	36.3	2.5
1959 . . .	26.3	91.3	485	48.0	7,320	40.3	2,123	899	70.0	33.0	2.6
1960 . . .	26.2	92.7	479	51.2	8,006	43.2	2,235	944	62.8	28.8	2.7
1961 . . .	26.1	93.0	463	55.4	8,788	42.3	2,660	1,133	65.4	29.2	4.8
1962 . . .	25.6	92.6	461	55.6	8,823	41.2	2,639	1,110	63.0	28.2	6.0
1963 . . .	25.5	92.9	465	55.9	9,253	41.2	2,666	1,119	57.2	26.1	6.3
1964 . . .	25.2	96.5	471	61.7	10,501	43.7	2,833	1,221	59.4	28.3	6.5
1965 . . .	25.0	96.6	464	64.8	11,145	49.0	3,257	1,408	63.2	30.5	7.1
1966 . . .	25.0	94.3	460	64.4	11,038	52.3	3,764	1,639	70.0	33.9	7.7
1967 . . .	25.1	93.7	455	68.5	11,517	55.0	4,158	1,831	76.1	37.6	8.6
1968 . . .	25.1	94.5	453	71.1	12,264	56.8	4,425	1,972	82.1	40.1	9.6
1969 . . .	25.1	93.8	447	75.7	13,126	56.7	4,668	2,125	85.1	42.3	9.4
1970 . . .	25.1	97.1	440	82.4	14,661	60.3	5,185	2,402	89.9	45.5	9.9
1971 . . .	25.0	97.1	453	85.9	15,415	66.2	5,911	2,803	100.1	51.0	10.6
1972 . . .	25.1	95.6	404	87.3	15,535	71.2	6,340	3,091	100.8	53.5	10.9
						72.0	6,629	3,279	99.1	52.4	11.2

(a) Particulars of train-mileages, passenger-journeys, freight tons carried, and freight net ton-miles refer only to operations for which revenue is received. (b) At end of period. (c) Short tons (2,000 lb). (d) In terms of short tons.

TRANSPORT AND COMMUNICATION—*continued*  
ROAD TRANSPORTCOMMUNICATION

Year ended 30 June—	Tramway trolley-bus and omnibus services(a) Passenger journeys	Motor vehicles on the register(b)				Postal matter dealt with(d)	Telephones		Broadcasting and television licences in force(b)		
		Motor cars and station wagons	Commercial vehicles (c)	Motor cycles	Total motor vehicles (including motor cycles)		Instruments in service (b)	Services in operation (b)(e)	Telegrams (f)	Broadcast listeners <sup>1</sup>	Television viewers <sup>2</sup>
	mil.	'000	'000	'000	'000	mil. articles	'000	'000	mil.	'000	'000
1902 . . .	n.a.	..	..	..	..	(g)384	(g)36	(g)28	(g)8.2	..	..
1912 . . .	360	n.a.	n.a.	n.a.	n.a.	(g)698	(g)118	(g)96	(g)13.9	..	..
1922 . . .	569	102			102	778	259	196	16.8	(h)1	..
1932 . . .	589	420	96	72	588	887	485	364	13.9	369	..
1942 . . .	(i)1,067	451	250	49	751	1,124	739	531	26.1	1,320	..
1944 . . .	1,281	494	274	53	820	1,114	800	557	35.8	1,395	..
1945 . . .	1,290	506	291	57	854	1,155	828	578	37.6	1,415	..
1946 . . .	1,275	523	333	73	929	1,166	856	608	38.0	1,437	..
1947 . . .	1,216	548	378	87	1,013	1,235	905	648	35.7	1,678	..
1948 . . .	1,199	589	419	100	1,108	1,307	963	688	36.8	1,704	..
1949 . . .	1,185	651	457	118	1,225	1,375	1,028	734	37.9	1,763	..
1950 . . .	1,076	764	506	134	1,404	1,466	1,110	795	38.0	1,841	..
1951 . . .	1,092	879	555	146	1,580	1,526	1,209	870	37.2	1,885	..
1952 . . .	1,019	1,028	588	155	1,770	1,482	1,301	939	29.8	1,961	..
1953 . . .	988	1,105	587	148	1,840	1,506	1,383	1,001	25.9	1,986	..
1954 . . .	981	1,196	611	141	1,947	1,604	1,476	1,070	25.1	2,042	..
1955 . . .	966	1,342	654	133	2,130	1,653	1,587	1,153	25.5	2,035	..
1956 . . .	927	1,430	693	123	2,246	1,741	1,704	1,240	25.4	2,089	..
1957 . . .	833	1,537	710	118	2,366	1,784	1,814	1,318	24.0	2,107	74
1958 . . .	803	1,661	731	114	2,506	1,895	1,937	1,407	22.9	2,138	291
1959 . . .	778	1,784	755	110	2,649	1,951	2,056	1,491	22.5	2,264	578
1960 . . .	758	1,938	784	102	2,824	1,953	2,164	1,562	22.2	2,283	955
1961 . . .	726	2,070	800	93	2,963	2,048	2,266	1,631	21.8	2,256	1,217
1962 . . .	718	2,201	815	85	3,101	2,101	2,382	1,719	21.6	2,220	1,424
1963 . . .	712	2,377	832	77	3,286	2,202	2,523	1,812	21.8	2,240	1,655
1964 . . .	702	2,583	846	69	3,498	2,342	2,670	1,919	23.4	2,302	1,882
1965 . . .	685	2,792	858	65	3,715	2,443	2,811	2,010	24.3	2,358	2,045
1966 . . .	653	2,947	868	64	3,878	2,556	2,978	2,120	25.0	2,526	2,226
1967 . . .	621	3,104	880	69	4,053	2,683	3,178	2,235	25.6	2,538	2,405
1968 . . .	609	3,305	892	83	4,279	2,648	3,392	2,359	(j)23.4	2,580	2,519
1969 . . .	590	3,499	911	98	4,508	2,648	3,599	2,511	(j)23.3	2,630	2,649
1970 . . .	575	3,720	938	114	4,772	2,783	3,913	2,704	(j)23.2	2,670	2,758
1971 . . .	561	3,935	961	144	5,039	2,806	4,157	2,857	(j)21.2	2,699	2,845
1972 . . .	503	4,147	998	180	5,325	2,767	4,400	2,978	(j)20.2	2,758	2,939

(a) Government and municipal. Trolley-bus services ceased in August 1969. (b) At end of period. (c) Open and closed light commercial type vehicles, rigid and articulated trucks, other truck type vehicles and buses. (d) Letters, postcards, letter-cards, newspapers, packets, parcels, and registered articles. (e) All single lines plus one half the number of duplex lines. Until the introduction of duplex services in December 1948, statistics of exchange lines and telephone services were identical. (f) Telegrams despatched to places within Australia and despatched to or received from overseas. (g) Year ended previous December. (h) Year 1923-24. First year licences issued. (i) Tramway passenger journeys only before 1942. (j) Excludes telegrams received from overseas. These particulars are no longer available.



## NATIONAL ACCOUNTS

## GROSS DOMESTIC PRODUCT

## GROSS FIXED CAPITAL EXPENDITURE

Year	GROSS DOMESTIC PRODUCT						GROSS FIXED CAPITAL EXPENDITURE					
	At current prices			At constant prices(a)			At current prices		At constant prices(a)			
	(b)	(c)	(d)	1953-54 prices(d)	1959-60 prices(d)	1966-67 prices(d)	(e)	(d)	1953-54 prices(d)	1959-60 prices(d)	1966-67 prices(d)	
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1900-01	419	..	..	..	..	..	56	..	..	..	..	..
1901-02	444	..	..	..	..	..	74	..	..	..	..	..
1903-04	449	..	..	..	..	..	51	..	..	..	..	..
1904-05	445	..	..	..	..	..	50	..	..	..	..	..
1905-06	478	..	..	..	..	..	53	..	..	..	..	..
1906-07	538	..	..	..	..	..	72	..	..	..	..	..
1907-08	536	..	..	..	..	..	75	..	..	..	..	..
1908-09	583	..	..	..	..	..	76	..	..	..	..	..
1909-10	624	..	..	..	..	..	80	..	..	..	..	..
1910-11	683	..	..	..	..	..	98	..	..	..	..	..
1911-12	733	..	..	..	..	..	125	..	..	..	..	..
1912-13	802	..	..	..	..	..	146	..	..	..	..	..
1913-14	865	..	..	..	..	..	154	..	..	..	..	..
1914-15	833	..	..	..	..	..	132	..	..	..	..	..
1915-16	909	..	..	..	..	..	125	..	..	..	..	..
1916-17	943	..	..	..	..	..	123	..	..	..	..	..
1917-18	963	..	..	..	..	..	112	..	..	..	..	..
1918-19	1,089	..	..	..	..	..	146	..	..	..	..	..
1919-20	1,257	..	..	..	..	..	209	..	..	..	..	..
1920-21	1,426	..	..	..	..	..	245	..	..	..	..	..
1921-22	1,378	..	..	..	..	..	261	..	..	..	..	..
1922-23	1,510	..	..	..	..	..	273	..	..	..	..	..
1923-24	1,569	..	..	..	..	..	290	..	..	..	..	..
1924-25	1,722	..	..	..	..	..	303	..	..	..	..	..
1925-26	1,659	..	..	..	..	..	308	..	..	..	..	..
1926-27	1,729	..	..	..	..	..	328	..	..	..	..	..
1927-28	1,739	..	..	..	..	..	329	..	..	..	..	..
1928-29	1,711	..	..	..	..	..	309	..	..	..	..	..
1929-30	1,566	..	..	..	..	..	240	..	..	..	..	..
1930-31	1,288	..	..	..	..	..	166	..	..	..	..	..
1931-32	1,209	..	..	..	..	..	119	..	..	..	..	..
1932-33	1,264	..	..	..	..	..	134	..	..	..	..	..
1933-34	1,356	..	..	..	..	..	156	..	..	..	..	..
1934-35	1,422	..	..	..	..	..	203	..	..	..	..	..
1935-36	1,574	..	..	..	..	..	226	..	..	..	..	..
1936-37	1,717	..	..	..	..	..	253	..	..	..	..	..
1937-38	1,857	..	..	..	..	..	306	..	..	..	..	..
1938-39	1,847	1,860	(1,800)	..	..	..	298	(316)	..	..	..	..
1939-40	..	2,040	..	..	..	..	..	..	..	..	..	..
1940-41	..	2,174	..	..	..	..	..	..	..	..	..	..
1941-42	..	2,548	..	..	..	..	..	..	..	..	..	..
1942-43	..	2,936	..	..	..	..	..	..	..	..	..	..
1943-44	..	2,986	..	..	..	..	..	..	..	..	..	..
1944-45	..	2,906	..	..	..	..	..	..	..	..	..	..
1945-46	..	3,006	..	..	..	..	..	..	..	..	..	..
1946-47	..	3,234	..	..	..	..	..	..	..	..	..	..
1947-48	..	3,988	..	..	..	..	..	..	..	..	..	..
1948-49	..	4,524	4,319	7,269	..	..	..	792	1,350	..	..	..
1949-50	..	..	5,093	7,835	..	..	..	1,064	1,652	..	..	..
1950-51	..	..	6,767	8,297	..	..	..	1,524	2,049	..	..	..
1951-52	..	..	7,260	8,532	..	..	..	1,938	2,194	..	..	..
1952-53	..	..	8,233	8,456	..	..	..	1,937	1,983	..	..	..
1953-54	..	..	9,000	9,000	10,449	..	..	2,128	2,128	2,511	..	..
1954-55	..	..	9,588	9,478	11,065	..	..	2,353	2,294	2,698	..	..
1955-56	..	..	10,388	10,005	11,622	..	..	2,567	2,380	2,811	..	..
1956-57	..	..	11,313	10,265	11,844	..	..	2,667	2,380	2,819	..	..
1957-58	..	..	11,569	10,417	12,104	..	..	2,856	2,499	2,951	..	..
1958-59	..	..	12,425	11,350	12,996	..	..	3,022	2,614	3,085	..	..
1959-60	..	..	13,686	11,963	13,686	16,321	..	3,405	2,886	3,405	3,950	..
1960-61	..	..	14,553	..	14,118	16,874	..	3,671	..	3,569	4,163	..
1961-62	..	..	14,881	..	14,248	17,058	..	3,730	..	3,579	4,184	..
1962-63	..	..	16,071	..	15,175	18,204	..	4,031	..	3,852	4,490	..
1963-64	..	..	17,802	..	16,272	19,430	..	4,521	..	4,247	4,948	..
1964-65	..	..	19,562	..	17,488	20,820	..	5,264	..	4,801	5,581	..
1965-66	..	..	20,497	..	17,689	21,170	..	5,714	..	5,069	5,903	..
1966-67	..	..	22,535	..	18,869	22,535	..	5,997	..	5,151	5,997	..
1967-68	..	..	24,032	..	..	23,391	..	6,528	..	..	6,348	..
1968-69	..	..	26,935	..	..	25,365	..	7,219	..	..	6,772	..
1969-70	..	..	29,722	..	..	26,798	..	7,950	..	..	7,150	..
1970-71	..	..	32,628	..	..	27,898	..	8,730	..	..	7,399	..
1971-72	..	..	36,014	..	..	28,792	..	9,397	..	..	7,455	..
1972-73p	..	..	40,755	..	..	29,875	..	9,662	..	..	7,192	..

(a) For a description of constant price estimates, see *Australian National Accounts*, op. cit. pp 15 and 105. (b) N. G. Butlin, *Australian Domestic Product, Investment and Foreign Borrowing 1861-1938-39*, Cambridge University Press, Cambridge, 1962. Gross domestic product excluding livestock accumulation approximates conceptually gross domestic product as defined in the Australian National Accounts. (c) Published by the Commonwealth Statistician. Figures prior to 1948-49 are from *National Income and Expenditure* 1955-56 and are not strictly comparable with subsequent figures because of a number of definitional changes and statistical revisions; see pages 18-19, 117-20, *Australian National Accounts* 1948-49 to 1961-62, Commonwealth Bureau of Census and Statistics. (d) *Australian National Accounts* 1971-72, Commonwealth Bureau of Census and Statistics, and, for the last five years, the Budget Paper *National Income and Expenditure* 1972-73. The figures of \$1,800m for gross national product and \$316m for gross fixed capital expenditure in 1938-39 are based on a reconstruction of earlier estimates, and are approximately consistent with the present Australian National Account series. Mr B. D. Haig ('1938-39 National Income Estimates', *Australian Economic History Review*, Vol. vii, No. 2, September 1967) has adjusted components of gross national expenditure and imports and exports for changes in prices. If the price indexes implied by Mr Haig's estimates are used to revalue at 1938-39 prices gross domestic product and gross fixed capital expenditure for 1948-49, values of \$2,384m and \$434m, respectively are obtained. (e) N. G. Butlin, op. cit. For a variety of reasons, Professor Butlin's gross domestic capital formation figures given here differ conceptually from those for gross fixed capital expenditure in the Australian National Accounts.

## PRIVATE FINANCE

NOTE ISSUE		BANKING				
Year ended 30 June—	Australian note issue (a)	Trading banks		Bank clearings (c)	Savings banks	
		Advances (b)	Deposits (b)		Depositors balances(d)	
	\$m	\$m	\$m	\$m	\$m	\$m
1902 . . . . .	..	188	186	13		62
1912 . . . . .	16	238	300	25		118
1922 . . . . .	107	364	578	65		308
1932 . . . . .	103	522	638	55		396
1942 . . . . .	205	648	965	142		549
1945 . . . . .	373	503	1,525	149		1,134
				<i>Debits to customers' accounts(c)</i>		
1946 . . . . .	400	519	1,397	(e)296		1,327
1947 . . . . .	405	672	1,445	349		1,320
1948 . . . . .	393	824	1,598	451		1,363
1949 . . . . .	426	966	1,830	514		1,428
1950 . . . . .	463	1,148	2,264	655		1,524
1951 . . . . .	551	1,357	2,826	897		1,675
1952 . . . . .	605	1,656	2,564	866		1,784
1953 . . . . .	657	1,450	2,856	877		1,895
1954 . . . . .	688	1,690	3,061	1,100		2,020
1955 . . . . .	726	1,982	3,089	1,127		2,145
1956 . . . . .	745	1,945	2,992	1,123		2,282
1957 . . . . .	763	1,897	3,231	1,250		2,455
1958 . . . . .	775	2,060	3,240	1,282		2,594
1959 . . . . .	790	2,007	3,362	1,432		2,783
1960 . . . . .	843	2,211	3,611	1,737		3,045
1961 . . . . .	839	2,238	3,600	1,654		3,155
1962 . . . . .	856	2,287	3,837	1,848		3,470
1963 . . . . .	869	2,465	4,064	2,028		3,940
1964 . . . . .	870	2,610	4,649	2,318		4,476
1965 . . . . .	862	2,955	5,038	2,653		4,887
1966 . . . . .	849	3,183	5,308	2,672		5,254
1967 . . . . .	938	3,548	5,614	2,978		5,765
1968 . . . . .	1,006	4,020	6,087	3,588		6,222
1969 . . . . .	1,107	4,384	6,706	4,055		6,707
1970 . . . . .	1,216	4,903	7,099	4,891		7,105
1971 . . . . .	1,369	5,317	7,431	5,711		7,635
1972 . . . . .	1,499	5,876	8,322	6,200		8,391
1973 . . . . .	1,758	7,856	11,072	8,035		10,089

(a) Last Wednesday in June. (b) June quarter up to and including 1945; weekly average for month of June from 1946 onwards. (c) Weekly average, June month. (d) End of June. (e) Bank clearings, \$179m.

## LIFE INSURANCE(a)(b)

	Ordinary(c)		Industrial		Total	
	Policies	Sum assured	Policies	Sum assured	Policies	Sum assured
	'000	\$m	'000	\$m	'000	\$m
1901 . . . . .	414	216	236	10	650	226
1911 . . . . .	484	218	467	20	951	238
1921 . . . . .	730	362	973	60	1,703	422
1931 . . . . .	871	570	1,550	134	2,421	704
1941 . . . . .	1,340	926	2,780	254	4,120	1,180
1944 . . . . .	1,506	1,071	3,158	306	4,664	1,376
1945 . . . . .	1,587	1,157	3,279	327	4,866	1,484
1946 . . . . .	1,730	1,310	3,429	357	5,159	1,667
1947 . . . . .	1,902	1,481	3,541	386	5,442	1,867
1948 . . . . .	2,071	1,669	3,643	418	5,714	2,087
1949 . . . . .	2,224	1,862	3,725	448	5,949	2,310
1950 . . . . .	2,377	2,094	3,793	477	6,170	2,571
1951 . . . . .	2,554	2,424	3,843	507	6,396	2,931
1952 . . . . .	2,731	2,757	3,873	541	6,604	3,298
1953 . . . . .	2,893	3,105	3,881	571	6,774	3,677
1954 . . . . .	3,033	3,482	3,827	594	6,860	4,076
1955 . . . . .	3,184	3,942	3,766	615	6,949	4,556
1956 . . . . .	3,319	4,447	3,702	631	7,021	5,077
1957 . . . . .	3,446	5,067	3,615	645	7,061	5,712
1958 . . . . .	3,577	5,747	3,531	657	7,108	6,404
1959 . . . . .	3,710	6,571	3,443	665	7,154	7,236
1960 . . . . .	4,110	7,690	3,340	686	7,450	8,376
1961 . . . . .	4,201	8,743	3,199	707	7,400	9,450
1962 . . . . .	4,291	9,854	3,076	743	7,366	10,597
1963 . . . . .	4,401	11,010	2,953	777	7,354	11,787
1964 . . . . .	4,539	12,481	2,851	823	7,390	13,304
1965 . . . . .	4,705	14,057	2,755	871	7,460	14,928
1966 . . . . .	4,873	15,750	2,644	918	7,517	16,668
1967 . . . . .	5,051	17,762	2,603	981	7,654	18,743
1968 . . . . .	5,251	20,357	2,561	1,041	7,812	21,397
1969(d) . . . . .	5,428	23,245	2,530	1,114	7,958	24,360
1970 . . . . .	5,607	27,229	2,500	1,212	8,107	28,441
1971 . . . . .	5,873	32,258	2,471	1,329	8,344	33,586
1972(e) . . . . .	6,173	37,967	2,380	1,446	8,553	39,413

(a) Existing business in Australia. (b) Relates to companies' financial years which ended during the calendar years shown. (c) Includes superannuation business. (d) Prior to 1969 includes business in Papua New Guinea. (e) Figures relate to end of December and are derived from monthly figures.

## PUBLIC FINANCE

Year ended 30 June—	COMMONWEALTH				STATE				GOVERNMENT SECURITIES ON ISSUE(a)				
	Consolidated revenue fund		Net loan fund expenditure (b)	Taxation collections	Consolidated revenue fund		Net loan fund expenditure (b)	Taxation collections	Commonwealth	State	Total	Overseas	In Australia
	Revenue	Expenditure			Revenue	Expenditure							
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1902 . . . . .	23	8		18	56	58	19	5		429	429	n.a.	n.a.
1912 . . . . .	41	29	2	32	83	82	33	11	12	557	569	388	181
1922 . . . . .	128	128	10	99	170	175	67	36	708	1,039	1,747	823	924
1932 . . . . .	143	143	8	109	199	242	12	65	692	1,800	2,492	1,320	1,172
1942 . . . . .	420	420	426	362	305	299	17	115	1,340	2,038	3,378	1,312	2,066
1945 . . . . .	754	754	532	679	338	334	12	44	3,355	2,008	5,364	1,231	4,133
1946 . . . . .	782	782	319	709	332	331	14	50	3,670	2,005	5,675	1,142	4,533
1947 . . . . .	863	863	98	774	346	350	48	57	3,733	2,044	5,777	1,130	4,647
1948 . . . . .	932	932	26	848	394	398	75	64	3,702	2,119	5,821	1,117	4,704
1949 . . . . .	1,109	1,109	-9	952	452	456	102	73	3,685	2,202	5,887	1,088	4,798
1950 . . . . .	1,161	1,161	85	1,018	521	525	147	83	3,731	2,367	6,098	1,099	4,999
1951 . . . . .	1,684	1,684	101	1,447	613	613	257	103	3,777	2,619	6,396	1,067	5,329
1952 . . . . .	2,034	2,034	63	1,848	777	783	395	126	3,838	2,993	6,830	1,113	5,717
1953 . . . . .	2,080	2,080	71	1,783	876	877	322	142	3,893	3,288	7,181	1,142	6,038
1954 . . . . .	2,046	2,046	83	1,810	941	935	335	161	3,964	3,573	7,537	1,165	6,372
1955 . . . . .	2,135	2,135	66	1,882	991	998	321	179	3,998	3,846	7,844	1,216	6,628
1956 . . . . .	2,277	2,277	88	2,014	1,052	1,082	312	196	4,031	4,121	8,151	1,269	6,882
1957 . . . . .	2,624	2,624	88	2,208	1,154	1,168	317	229	3,957	4,396	8,353	1,216	7,137
1958 . . . . .	2,648	2,648	90	2,338	1,210	1,224	314	256	3,670	4,686	8,356	1,248	7,108
1959 . . . . .	2,592	2,592	132	2,283	1,280	1,295	338	276	3,512	4,988	8,499	1,319	7,180
1960 . . . . .	2,877	2,877	119	2,519	1,399	1,404	357	320	3,334	5,301	8,635	1,389	7,246
1961 . . . . .	3,277	3,277	83	2,871	1,511	1,513	384	335	3,215	5,630	8,845	1,413	7,433
1962 . . . . .	3,283	3,283	182	2,858	1,609	1,617	395	353	3,119	5,963	9,082	1,424	7,658
1963 . . . . .	3,371	3,371	274	2,907	1,694	1,696	405	391	3,121	6,314	9,434	1,522	7,912
1964 . . . . .	3,809	3,809	226	3,247	1,829	1,829	438	448	3,172	6,691	9,863	1,545	8,318
1965 . . . . .	4,418	4,418	167	3,819	1,947	1,965	477	493	3,134	7,091	10,225	1,529	8,695
1966 . . . . .	4,879	4,879	(c)260	4,221	2,094	2,119	492	536	3,145	7,495	10,639	1,505	9,134
1967 . . . . .	5,228	5,228	(c)450	4,492	2,286	2,289	516	601	3,275	7,934	11,209	1,532	9,677
1968 . . . . .	5,760	5,760	(c)655	4,953	2,463	2,468	540	683	3,600	8,317	11,917	1,558	10,358
1969 . . . . .	6,086	6,086	(c)236	5,530	2,689	2,700	574	781	3,682	8,831	12,512	1,698	10,815
1970 . . . . .	6,979	6,979	(c)446	6,382	3,010	3,028	615	875	3,885	9,320	13,205	1,580	11,625
1971 . . . . .	7,838	7,838	(c)523	7,186	3,457	3,483	628	913	3,801	9,691	13,492	1,546	11,946
1972 . . . . .	8,688	8,688	(c)444	7,943	4,035	4,050	896	1,304	3,808	10,227	14,035	1,442	12,592
1973 . . . . .	9,278	9,278	(c)544	8,477	4,675	4,704	973	1,667	3,963	10,781	14,744	1,265	13,479

(a) At 30 June. Expressed in Australian currency equivalents at ruling rates of exchange.

(b) Loan expenditure on works and services

(c) Includes expenditure financed under the United States Defence Credits Arrangements.

SOCIAL  
PENSIONS, BENEFITS, ETC.

Year ended 30 June—	Age and invalid pensions		Child endowment		Widows' pensions		Unemployment benefits	
	Pensioners (a)	Amount paid	Children endowed (a)	Endowment paid	Pensioners (a)	Amount paid	No. on benefit—weekly average	Amount paid
	'000	\$m	'000	\$m	'000	\$m	'000	\$m
1902 . . . . .								
1912 . . . . .	90	4.3						
1922 . . . . .	147	10.8						
1932 . . . . .	261	22.3						
1942 . . . . .	341	38.5	910	22.6				
1945 . . . . .	316	43.4	939	24.1	44	5.9		
1946 . . . . .	333	53.9	965	36.0	45	6.5		
1947 . . . . .	364	58.8	1,007	(b)39.7	43	6.7	6	1.0
1948 . . . . .	381	73.1	1,050	38.9	43	7.8	9	1.8
1949 . . . . .	403	83.4	1,105	48.6	43	8.8	4	0.7
1950 . . . . .	414	89.1	1,836	(b)60.7	42	8.8	2	(c)
1951 . . . . .	417	99.0	2,389	87.2	42	9.7	13	2.5
1952 . . . . .	426	119.6	2,518	93.2	41	11.2	1	(c)
1953 . . . . .	451	144.8	2,624	(b)106.5	41	12.7	2	(c)
1954 . . . . .	478	162.6	2,717	101.5	41	13.2	30	9.1
1955 . . . . .	510	176.0	2,789	105.1	42	13.7	14	5.0
1956 . . . . .	535	203.3	2,876	(b)120.8	43	15.4	4	1.4
1957 . . . . .	554	218.4	2,978	114.1	45	17.7	4	1.4
1958 . . . . .	574	243.2	3,074	117.5	47	19.7	12	4.2
1959 . . . . .	598	259.1	3,172	(b)135.1	50	21.6	24	9.8
1960 . . . . .	619	294.0	3,252	125.1	50	24.3	28	11.9
1961 . . . . .	651	315.9	3,340	(b)148.6	52	26.9	21	9.0
1962 . . . . .	691	360.5	3,420	132.8	55	30.2	22	8.9
1963 . . . . .	711	375.5	3,458	135.4	57	31.4	53	25.3
1964 . . . . .	725	399.9	3,631	(b)168.8	58	41.6	40	21.3
1965 . . . . .	736	426.6	3,711	172.8	62	47.0	26	13.5
1966 . . . . .	744	442.4	3,763	176.4	65	50.0	14	6.8
1967 . . . . .	764	481.8	3,835	(b)199.3	69	56.4	15	7.8
1968 . . . . .	797	514.0	3,891	187.9	73	61.1	21	11.2
1969 . . . . .	827	558.6	3,996	193.3	75	69.1	21	11.2
1970 . . . . .	913	642.0	4,079	(b)220.1	78	81.8	18	9.3
1971 . . . . .	942	702.3	4,156	198.5	87	90.5	13	8.9
1972 . . . . .	972	818.5	4,235	216.6	90	104.6	15	10.8
1973 . . . . .	1,081	1,072.4	4,239	233.4	93	140.5	29	26.0

(a) At 30 June.  
than \$0.05m.

(b) Five 12-weekly payments made during the year instead of the normal four.

(c) Less



SOCIAL—continued  
PENSIONS, BENEFITS ETC.—continued

Year ended 30 June—	Hospital and nursing home benefits— amount paid	Medical benefits— amount paid	Phar- maceutical benefits— amount paid	Total Common- wealth expenditure on Pensions, benefits, etc.(a)	War pensions		Service pensions	
					No.(b)	Amount paid	No.(b)	Amount paid
	\$m	\$m	\$m	\$m	'000	\$m	'000	\$m
1902 . . .	..	..	..	..	..	..	..	..
1912 . . .	..	..	..	4.3	..	..	..	..
1922 . . .	..	..	..	12.1	225	14.1	..	..
1932 . . .	..	..	..	23.0	274	14.9	..	..
1942 . . .	..	..	..	61.8	220	15.0	14	1.2
1945 . . .	..	..	..	78.8	281	22.9	13	1.3
1946 . . .	2.2	..	..	106.4	360	26.6	13	1.6
1947 . . .	8.8	..	..	124.0	395	30.2	14	1.8
1948 . . .	8.9	..	..	137.2	416	32.7	16	2.5
1949 . . .	11.8	..	..	161.6	440	37.9	16	2.7
1950 . . .	12.6	..	0.1	185.6	471	42.1	16	2.9
1951 . . .	13.1	..	5.9	230.0	503	53.1	17	3.0
1952 . . .	13.4	2.1	15.4	275.2	525	66.7	17	3.6
1953 . . .	14.4	3.5	14.4	331.0	544	72.6	19	4.5
1954 . . .	16.7	7.2	18.5	353.1	564	78.1	21	5.4
1955 . . .	18.6	13.5	21.5	378.6	584	87.8	22	6.0
1956 . . .	19.1	14.6	23.8	429.7	600	91.3	35	8.3
1957 . . .	19.6	18.3	23.4	447.8	614	95.6	39	9.8
1958 . . .	21.6	20.6	30.1	495.0	629	106.6	42	11.3
1959 . . .	29.6	23.2	41.9	556.5	643	109.0	44	12.4
1960 . . .	37.2	26.8	48.7	598.7	655	117.5	46	13.5
1961 . . .	41.3	28.4	55.8	661.2	662	132.6	50	15.6
1962 . . .	44.4	30.6	70.4	730.4	671	135.1	58	19.4
1963 . . .	47.3	32.6	76.9	758.6	671	140.7	62	21.7
1964 . . .	56.2	34.4	78.8	832.7	669	154.5	65	24.2
1965 . . .	58.8	44.6	82.2	890.4	660	153.5	65	25.5
1966 . . .	60.7	54.6	91.8	941.6	647	170.5	66	28.2
1967 . . .	67.4	58.2	101.3	1,031.1	632	161.7	67	29.1
1968 . . .	74.8	62.5	105.1	1,075.0	617	164.4	69	31.8
1969 . . .	85.9	66.5	118.4	1,162.3	601	182.8	67	34.1
1970 . . .	111.4	76.1	136.7	1,341.8	585	183.5	74	39.9
1971 . . .	122.8	115.5	160.3	1,477.2	570	191.4	77	43.7
1972 . . .	162.0	160.4	173.3	1,752.3	553	211.1	78	49.2
1973 . . .	198.9	191.1	177.6	2,197.4	546	225.0	96	72.3

(a) National Welfare Fund items only, including expenditure for all years on pensions, benefits, etc., which subsequently became payable from the National Welfare Fund. In addition to the items shown in the preceding columns, the tables include expenditure on—the rehabilitation service; milk for school children; tuberculosis campaign; sickness, special and funeral benefits and some miscellaneous welfare and health services. Excludes war and service pensions telephone rental concessions for pensioners and some minor welfare and health services. (b) At 30 June.

## EDUCATION

## POLICE AND PRISONS

Year(a)	Schools				Universities		Police		Prisons	Convicted prisoners
	Government		Non-government		Number	Students				
	Schools	Pupils	Schools	Pupils						
1902 . . .	'000	'000	'000	'000		'000	'000	No.	'000	
1912 . . .	7.2	637	2.4	144	4	1.9	5.9	n.a.	4.2	
1922 . . .	8.4	663	1.9	164	6	3.8	6.6	101	3.4	
1932 . . .	9.6	837	1.7	202	6	7.8	7.0	92	3.0	
1942 . . .	10.2	934	1.8	221	6	9.9	8.6	85	4.1	
1945 . . .	9.0	868	1.8	250	6	10.6	9.7	71	3.5	
1946 . . .	8.4	875	1.8	273	6	17.8	9.4	70	3.9	
1947 . . .	8.3	887	1.8	277	7	25.0	9.9	70	3.6	
1948 . . .	8.2	906	1.9	281	7	30.0	10.2	73	3.8	
1949 . . .	8.0	928	1.8	281	7	31.9	10.6	72	3.5	
1950 . . .	7.9	971	1.8	293	8	31.1	11.1	71	3.8	
1951 . . .	7.8	1,027	1.9	310	8	30.0	11.5	70	4.0	
1952 . . .	7.6	1,078	1.9	326	8	31.1	11.9	70	4.2	
1953 . . .	7.6	1,145	1.9	348	8	29.1	12.6	69	4.8	
1954 . . .	7.6	1,206	2.0	366	8	28.3	12.7	70	4.8	
1955 . . .	7.6	1,275	2.0	388	9	28.9	12.6	71	4.8	
1956 . . .	7.6	1,337	2.1	410	9	30.3	12.9	72	5.1	
1957 . . .	7.7	1,357	2.1	432	9	34.0	13.5	73	6.0	
1958 . . .	7.7	1,427	2.0	453	9	36.6	14.1	73	6.4	
1959 . . .	7.8	1,498	2.0	474	10	41.5	14.5	73	6.6	
1960 . . .	7.8	1,560	2.1	492	10	47.2	14.9	74	6.6	
1961 . . .	7.9	1,613	2.1	511	10	53.4	15.3	77	6.8	
1962 . . .	7.9	1,662	2.1	527	10	57.7	15.9	75	7.2	
1963 . . .	7.9	1,711	2.2	540	10	63.3	16.4	74	7.4	
1964 . . .	7.9	1,754	2.2	553	10	69.1	16.7	73	7.7	
1965 . . .	7.8	1,799	2.2	565	13	76.2	17.2	74	7.7	
1966 . . .	7.8	1,855	2.2	580	13	83.3	17.6	74	7.7	
1967 . . .	7.7	1,919	2.2	583	14	91.3	18.4	76	8.1	
1968 . . .	7.7	1,991	2.2	595	14	95.4	19.0	75	8.7	
1969 . . .	7.6	2,055	2.2	601	14	101.5	19.7	79	8.8	
1970 . . .	7.5	2,114	2.2	603	14	109.7	20.1	74	9.2	
1971 . . .	7.5	2,160	2.2	608	17(b)	116.8	20.3	77	9.3	
1972 . . .	7.4	2,197	2.2	611	17(b)	123.8	21.0	79	9.5	
1973 . . .	7.4	2,229	2.2	612	17(b)	128.7	22.2	80	9.8	

(a) Years ended at varying dates for education statistics. Years ended 30 June for Police and Prisons. (b) Includes two universities not yet enrolling students.



# CHRONOLOGICAL TABLE

## CHIEF EVENTS IN AUSTRALIA SINCE 1955

NOTES. In issues of the Year Book up to No. 48 (*see* No. 48, page 1201) this table covered events back to the establishment of settlement in Australia in 1788. Later issues up to No. 50 (*see* No. 50, page 1289) covered events back to 1945. This issue covers the years 1955 to 1972 and the first half of 1973.

For each earlier year this Table rarely contains more than two or three items; for recent years, however, in order to provide a wide cover of events, etc., it includes a much greater number. Both the nature of the Table and considerations of space render necessary a continual reduction in these items, and for more information the reader should therefore consult earlier issues.

- 1955 First power generated by Snowy Mountains Hydro-electric Authority. Australian population reached 9,000,000. Cocos (Keeling) Islands became Territory under authority of Commonwealth.
- 1956 Amendment to Conciliation and Arbitration Act altered the structure of the arbitration machinery by separating judicial functions from conciliation and arbitration functions.
- 1957 High Court ruled that interstate vehicles could not be compelled to register in New South Wales, but upheld validity of Victorian tax on commercial vehicles, including those engaged in interstate trade, imposed solely for the maintenance of roads. National Capital Development Commission set up to co-ordinate development of Canberra.
- 1958 Prime Minister officially opened Australia's first nuclear reactor at Lucas Heights, near Sydney. Christmas Island (Indian Ocean) transferred to Australian Administration.
- 1959 Annual Holidays Act, 1944–1958 provided for three weeks' annual holiday for all New South Wales workers. Population reached 10,000,000.
- 1960 Provision made for Social Service benefits to be paid to Australian Aborigines. *Commonwealth Banks Act* 1959 and *Reserve Bank Act* 1959 proclaimed (*see* page 498). National Service training suspended. Commonwealth Government announced special economic measures designed to counter inflationary trend and safeguard overseas funds.
- 1961 Commonwealth *Matrimonial Causes Act* 1959 unifying State Acts became operative. Oil discovered in south-west Queensland. Australian population census taken. Iron ore deposits estimated at 1,800 million tons discovered at Pilbara (Western Australia).
- 1962 Commonwealth and Western Australian Electoral Acts amended to provide for votes for Aborigines. Aborigines exercised voting rights in Northern Territory for first time.
- 1963 Approval given to agreement for United States to operate a naval communications station at North West Cape, Western Australia. Australian population reached 11,000,000.
- 1964 R.A.N. Destroyer *Voyager* sunk in collision off Jervis Bay. New South Wales Government employees granted four weeks' annual leave. Moonie to Brisbane oil pipeline opened. Northern Territory removed discrimination against Aborigines. Australian forces saw action in Malaysia. Resumption of National Service Training and establishment of special Reserve Forces announced.
- 1965 Full High Court judgement on intra-state airlines case held that intra-state services need to hold both a State licence and a Commonwealth licence. Martin Report on tertiary education tabled in House of Representatives. Economic sanctions imposed on Rhodesia.
- 1966 The New Zealand–Australia Free Trade Agreement came into force. Australia adopted decimal currency. Immigration laws amended to provide for relaxation of restrictions on entry of persons of non-European race. Member for Australian Capital Territory given full voting rights. 1966 census taken. Permanent employment of married women by Commonwealth Government proclaimed.
- 1967 Worst bushfires in history of Tasmania. *Trade Practices Act* 1965–1967 came into force. Australian Resources Development Bank formed. Government decision not to devalue Australian dollar with pound sterling announced. Australia launched its first satellite at Woomera. Senate select committee recommended that Australia change over to metric system of weights and measures. Prime Minister, Rt Hon. Harold Holt drowned off Portsea, Victoria.



- 1968 Uniform Commonwealth-State censorship laws came into force. Twelve-mile fishing limit around Australia, Nauru, Papua New Guinea, and Cartier Islands operated from 30 January. Nauru became an independent nation on 31 January. Joint Commonwealth-State off-shore petroleum legislation operated from 1 April. Population reached 12,000,000. Northern Territory member in House of Representatives given full voting rights. *Privy Council (Limitation of Appeals) Act* 1968 came into operation. An Ordinance to prevent the takeover of life insurance companies registered in the Australian Capital Territory became operative.
- 1969 The *Copyright Act* 1968 became operative. The Arbitration Commission handed down its decision on equal pay for women (*see* page 267). The High Court ruled that the States had no rights or jurisdiction over territorial waters adjacent to their coastline or over the sea-bed. Bass Strait under-sea oil piped to shore for the first time.
- 1970 The *Patents Act* 1969 came into effect. The Federal Government imposed controls on the export of Australian natural gas. The *Indian-Pacific* rail passenger service inaugurated. Australia signed the Nuclear Non-Proliferation Treaty. A High Court judgment in Sydney upheld the validity of the Trade Practices Tribunal. The *Continental Shelf (Living Natural Resources) Act* 1968 came into effect. The *Australian Industry Development Corporation Act* 1970 assented to. The *Marginal Dairy Farmers Agreement Act* 1970 came into effect. The Snowy Mountains Engineering Corporation was established. Tullamarine International Airport opened. The Metric Conversion Board appointed. Assent was given to two land lease ordinances granting the Aborigines exclusive land leasing rights for specified purposes over the 93,000 square miles of Aboriginal reserves in the Northern Territory. Coal miners in three states were awarded a 35 hour working week which is to be phased in over a twelve month period. New film censorship procedures agreed to by Federal and State ministers. The flexible reserve wool price scheme came into operation. Senate elections held. Voting age reduced to 18 years in Western Australia. Assent given to an ordinance in the Australian Capital Territory that prevented overseas take-overs of mining companies.
- 1971 The Commonwealth and States agreed on details of the rural reconstruction scheme. Victorian Aborigines to be granted ownership of reserves at Lake Tyers and Framlingham, Victoria. Labor Party returned in Western Australia. South Australia lowered the age of adulthood to eighteen years. It was announced that the Commonwealth Government would prepare a program for the movement of Papua New Guinea to full internal self-government in the period 1972-76. The Yirrkala Aborigines legal challenge for land rights at Gove was dismissed. Australia signed a new five power defence agreement in London. Seabed agreement between Indonesia and Australia signed in Canberra. The new Commonwealth Department of the Environment, Aborigines and the Arts created. Australia joined the Organisation for Economic Co-operation and Development. An Australian Labor Party delegation of five left for a visit to China (People's Rep). The 1971 Census of Population and Housing was held. First Commonwealth Government fellowships for Australian composers awarded. Sydney City Council released its strategic plan, up to the year 2000, for the City of Sydney. Legislation banning resale-price maintenance became operative. The two-years full-time duty under the National Service Act reduced to eighteen months. Historic wool sale in Canberra, buyers seeing only representative samples from core tests. Rural reconstruction employment training scheme commenced for farmers displaced from rural industry. The Metal Trades Industry Association and metal trades unions in New South Wales agreed on the principle of full accident pay to cover 80,000 N.S.W. unionists. Patient's contribution for drugs under the Pharmaceutical Benefits Scheme increased from 50 cents to 1 dollar. The operational role of the Australian Task Force in South Vietnam ended. The Commonwealth Bureau of Roads began a nationwide survey of roads. The report of the Senate Select Committee on Off-shore Petroleum Resources tabled. Australian Commission on Advanced Education was established.
- 1972 *January*. Female employees (approximately 1,300,000) received full entitlement to equal pay in terms of the 1969 Equal Pay Case decision (*see* page 267). The Waterside Workers Federation agreed to the voluntary retirement of 300 waterside workers on grounds of 'redundancy'. Australia's largest trade union, with over 150,000 members came into being with the merging of the Boilermakers' and Blacksmiths' Society, and the Sheet Metal Workers' Union with the Amalgamated Engineering Union. It was announced that the Government would introduce a scheme of portable age, invalid, widows' pensions for pensioners who leave Australia to reside overseas.
- February*. The revised Trade Practices Act—the *Trade Practices Act* 1971—became operative. The report tabled of the Senate Standing Committee on Education, Science and the Arts relating to the Commonwealth's Role in Teacher Education.

*March.* The New South Wales State Industrial Commission ratified an agreement to pay 25,000 steelworkers in Newcastle and Port Kembla full pay when off work through injury on the job.

*April.* State elections held and the Labor Party came into office in Tasmania.

*May.* State elections were held in Queensland and the Country Party-Liberal Party coalition was returned. The A.C.T.U. placed a black ban on all French ships and aircraft in Australia as a protest against continuing French nuclear testing in the Pacific; this ban was followed by widespread protests against the tests.

*June.* A 35-hour week was granted to waterside workers. The Australian Wool Board and the Australian Wool Commission were amalgamated to form the Australian Wool Marketing Corporation. The Ord River Dam was officially opened.

*July.* Broken Hill South mine closed. Aboriginal Tent Embassy outside Parliament House, Canberra closed having existed for several months.

*August.* Oil companies began delivering supplies of petrol to Sydney following a dispute by oil industry maintenance workers which began in June 1972. The dispute which had spread to four States ended with the acceptance by unions of pay and leave increases. The report of the Randall Committee set up to investigate the marketing of wool was tabled in the House of Representatives. Following the resignation of Sir Henry Bolte, Mr R. J. Hamer was elected Premier of Victoria. The Federal Government announced that the amount spent on universities and colleges of advanced education in the 1970-72 triennium would be increased by \$200 million for the 1973-75 triennium. An application by three South Australian teenagers claiming that because they could vote in their State elections they were eligible to vote in Federal elections, was rejected by the High Court.

*September.* In keeping with the change to metric units, Celsius was adopted in lieu of Fahrenheit.

*October.* The Tariff Board will conduct a systematic examination over the next six years of the protection levels afforded to highly protected manufacturing industries. Australia and Indonesia signed an agreement fixing the sea bed boundary between Australia and Indonesian Timor. Approval was given for 302 Asian Ugandans to be re-settled in Australia.

*November.* There was an outbreak of cholera among airline passengers arriving from overseas. Australia experienced its first domestic air hijack. The new Foreign Take-overs Act which came into force on 31 October, was used to freeze a number of take over bids. All major Queensland Government works must now include a statement of the environmental impact of such works. The development and production of the Sarich orbital engine is to be supported by B.H.P.

*December.* Federal elections for the House of Representatives were held and the Australian Labor Party was elected to govern for the first time in 23 years. An interim two man Ministry consisting of the Prime Minister, Mr E. G. Whitlam and the Deputy Prime Minister, Mr L. H. Barnard, was sworn in. The new Labor Government ended the call-up of National Servicemen; released National Service Act offenders; removed the excise duty on wine; announced that National Servicemen completing their training would be eligible for war service homes; announced the intention to apply for the 'equal pay case' to be re-opened and announced that in future sporting teams selected on a racial basis would be excluded from Australia. The Interim Committee, Australian Schools Commission was appointed. Mr Justice Woodward was appointed as Commissioner to conduct a judicial inquiry into the legal recognition of Aboriginal rights to land. The appointment of Miss Elizabeth Evatt as the first woman Presidential Member of the Conciliation and Arbitration Commission was announced. The Second Whitlam Ministry of 27 Ministers administering 37 departments (16 of them new departments) was sworn in. Australia announced the establishment of diplomatic relations with the People's Republic of China and the German Democratic Republic.

1973 *January.* For the first time, the Arbitration Commission awarded some workers full wages while they are on workers' compensation. Age, invalid and widows pensions were increased by \$1.50 per week. In future these pensioners will be paid at a common rate of \$21.50 for single and \$37.50 per week for married persons. Commonwealth Government increased repatriation pensions. An extra week's annual leave was granted to 250,000 Commonwealth public servants. It was announced that Australia is ratifying the Nuclear Non-proliferation Treaty and the Seabed Arms Control Treaty. The Premiers of Victoria and New South Wales and the Prime Minister agreed that Albury-Wodonga area would be developed as a new



growth complex. Land prices in the proposed growth complex have been frozen at the 3 October 1972 levels. A Royal Commission (3 members) will be appointed to inquire into the operation of the Post Office with a view to determining if it should be a statutory corporation.

*February.* Changes in Australian divorce rules came into operation. The United Kingdom-Australia Trade Agreement terminated. It was announced that an environment impact statement must be prepared for all developmental projects which have significant environmental consequences where Australian Government funds and or Federal constitutional power is involved. The Prime Minister visited Port Moresby on his way to a four day official visit to Indonesia. It was announced that a National Pipeline Authority along the lines of the Snowy Mountains Hydro-Electric Authority would be established to build a natural gas pipeline system across Australia. The Aboriginal Consultative Committee held its first meeting. The 40th International Eucharistic Congress was held in Melbourne. The first session of the 28th Parliament was opened.

*March.* The Labor Party was returned following elections in South Australia. Australia ratified ILO Conventions Numbers 87 (Freedom of Association) and 98 (Right to Organise and Collective Bargaining). Committee of Inquiry into a National Superannuation Scheme appointed. A \$300 million development plan for BHP at Port Kembla began; it will boost steel production capacity 1.7 million tons to around 5.5 million tons per annum by 1975-76. Federal Government announced that fees at all Australian universities and other tertiary education colleges will be abolished from 1 January 1974. The export ban on kangaroo products became effective. Legislation giving votes to eighteen year olds became effective under the *Commonwealth Electoral Act 1973*.

*April.* Federal Government appointed an 11 member National Committee on Social Welfare with the long term objective of recommending an integrated and balanced national welfare program. The Committee is headed by Mrs Marie Coleman who was appointed full-time for seven years. Federal Government set up a special task force headed by Dr H. C. Coombs to 'apply a close scrutiny to continuing policies of the previous Government so that room may be found for our own higher priority programs'.

*May.* National Wage Case decision resulted in an increase in Commonwealth award wages of 2 per cent plus \$2.50 a week. The rates of minimum wage for adult males were increased by \$9.00 a week. These increases operated from the first pay period commencing on or after 29 May. Subsequently similar increases operated in State awards in N.S.W., Vic., S.A. and Tas. Queensland Basic Wage rates were increased by \$1.90 a week for adult males and by \$2.05 a week for adult females. Margins in awards were increased by 2 per cent and the minimum wage for adult males was increased by \$7.70 a week. In Western Australia the basic wage for adult males was increased by \$3.55 a week and by \$3.60 a week for adult females. The minimum wage for adult males was increased by \$3.50 a week. The A.C.T. Abortion law reform legislation was defeated by 98 votes to 23 in the House of Representatives. An Australia-wide union ban on French goods, ships, aircraft and communications began in response to the forthcoming French nuclear tests. Victorian State elections were held and the Victorian Liberal Party was returned to government. The report of the Interim Committee for the Australian Schools Commission recommended a big increase in spending on education (\$660 million on primary and secondary schools over the next two years).

*June.* A N.S.W. environmental inquiry into the routing of the natural gas pipeline from the gas fields in South Australia to Sydney, recommended the southern route (Moomba-Young-Sydney). The Federal Government Prices Justification Tribunal has power to order cuts as well as rule against price rises. The Australian Government rejected the Australian Medical Association's decision to raise fees by an estimated 24.8 to 29.0 per cent. Following an application by Australia the International Court of Justice ordered France to halt nuclear tests in the atmosphere over the Pacific Ocean. HMAS *Supply* left Sydney for the French nuclear test zone to rendezvous with the New Zealand frigate *Otago*. The presence of the warships was a 'last resort' gesture against the French nuclear tests. Legislation amending the Income Tax Assessment Act concerning deductions for life insurance premiums and superannuation contributions became effective. Maternity Leave Act granted women employees in the Australian Public Service twelve weeks maternity leave on full pay, with up to additional forty weeks leave without pay. Male employees became eligible for one weeks leave on full pay at the time of the birth of a child; the Act operated retrospectively from 1 January 1973.



## DIARY OF PRINCIPAL ECONOMIC EVENTS, 1972-73

The principal economic events in earlier years were shown in the following issues.

<i>Years</i>	<i>Year Book No.</i>	<i>Pages</i>
1931 to 1938 . . .	33 . . .	968-77
1939 to 1944 . . .	36 . . .	1129-41
1945 to 1948 . . .	37 . . .	1235-45
1949 to 1951 . . .	39 . . .	1331-40
1952 to 1955 . . .	42 . . .	1149-60
1956 to 1958 . . .	46 . . .	1185-92
1958-59 to 1961-62 . . .	48 . . .	1188-1200
1962-63 . . .	49 . . .	1253-56
1963-64 . . .	50 . . .	1283-88
1964-65 . . .	51 . . .	1269-74
1965-66 . . .	52 . . .	1185-88
1966-67 . . .	53 . . .	1279-82
1967-68 . . .	54 . . .	1253-57
1968-69 . . .	55 . . .	1243-48
1969-70 . . .	56 . . .	1077-81
1970-71 . . .	57 . . .	1053-59
1971-72 . . .	58 . . .	1049-54

For Australia the 1972-73 financial year was a period of remarkable change. This was most evident in labour market fluctuations where unemployment reached the highest level registered for more than a decade, followed by a strong decline during the second half of the year which was complemented by a rapid increase in the number of job vacancies. Seasonally adjusted, there were 105,678 registered unemployed at the end of June 1972, rising to 118,665 at the end of August followed by a decline to 89,470 at the close of the financial year. Registered job vacancies, seasonally adjusted, more than doubled during the year to reach 70,138 at the end of June 1973.

The overall production performance of the economy can be summarised in the growth in gross domestic product at constant prices. This rose by 3.8 per cent in 1972-73, compared with increases of 3.2 per cent in 1971-72 and 4.1 per cent in 1970-71. Gross non-farm product at constant prices increased by 5.2 per cent, compared with increases of 2.9 per cent and 4.5 per cent in 1971-72 and 1970-71 respectively. Gross farm product at constant prices fell by 10.1 per cent, compared with increases of 6.4 per cent in 1971-72 and 0.5 per cent in 1970-71.

While gross domestic product at constant prices increased by 3.8 per cent, the increase in Australia's command over goods and services was greater than this because of improvement in the terms of trade. Because of the higher prices for farm output, the change in economic conditions in the farm sector is better indicated by the 39 per cent increase in farm product at current prices.

Inflation continued to be of major concern during 1972-73. The strong world demand and some restrictions on supplies acted to raise prices generally and for food and raw materials in particular. Acting against this were the increased productivity during the upswing in activity and the currency appreciations taking effect in the latter half of the year. The movement of the Consumer Price Index indicates that the rise in prices in the twelve months to June 1973 was 8.2 per cent, compared with 6.2 per cent in the same period in 1971-72. Food and clothing and drapery registered the largest price increases of 14 per cent and 8 per cent respectively.

The growth in wages, salaries and supplements in 1972-73 remained at about the 1971-72 rate of 11.6 per cent, compared with an increase of 14.8 per cent in 1970-71. Average employment (in male-unit terms) increased by about 2½ per cent in 1972-73, compared with an increase of about 1½ per cent in the preceding year. The growth in average earnings decreased from about 10 per cent in 1971-72 to about 9 per cent in 1972-73.

Farm income increased by 65 per cent in 1972-73, mainly as a result of large increases in the prices of wool and other pastoral products. Although the quantity of wool production decreased by 14 per cent its value increased by 88 per cent, and increased its share of total gross value of farm

production from 17 per cent to 25 per cent. The value of other pastoral products increased by 46 per cent while smaller increases were recorded by sugar cane and dairy products, poultry, etc. Adverse climatic conditions resulted in poor harvests in wheat and other grains and their value of production decreased slightly.

There was a marked increase in demand in 1972-73. Gross national expenditure at constant prices increased by 3.6 per cent, compared with an increase of 1.3 per cent in the preceding year. Factors contributing to this overall growth were increased growth rates of private and government final consumption expenditure, while they were partially offset by decreased rates of growth in private and public capital expenditure.

In 1972-73 exports of goods and services increased by 23 per cent (5½ per cent at constant prices) while imports of goods and services increased by only 3 per cent (5 per cent at constant prices), reflecting Australia's vastly improved terms of trade. This resulted in a surplus on goods and services of \$1,571 million, compared with \$403 million in 1971-72. The balance on current transactions resulted in net lending to overseas of \$955 million in 1972-73, compared with a net borrowing of \$140 million in 1971-72.

Exports of goods rose sharply to \$6,002 million, an increase of 27 per cent over the 1971-72 figure. Increases in wool, beef and veal exports accounted for 70 per cent of the increase in exports. The value of exports of coal, iron and steel and transport equipment also rose substantially. Exports of services only increased by 4 per cent in 1972-73. Imports of goods was almost stationary, for the second year in succession, rising by only \$5 million to \$3,796 million. Imports of machinery, petroleum and petroleum products fell, while imports of paper and textile manufactures, manufactured articles and transport equipment (including six F111 aircraft) rose. Imports of services increased by 9 per cent due mainly to increases in transportation (up 7 per cent) and travel (up 24 per cent).

In response to a continually high capital inflow during early 1972-73 and a rapidly increasing volume of international reserves, several important exchange control measures were introduced on 26 September 1972. On 23 December further measures to dampen the level of capital inflow were announced, and at the same time the Australian dollar was revalued. The parity of the Australian dollar, expressed in terms of the U.S. dollar, was appreciated by 4.85 per cent. The market rate was fixed at the new parity, giving an overall appreciation of 7.05 per cent. As a result of the devaluation of the U.S. dollar by 10 per cent on 13 February 1973, plus the floating of some other major currencies since December, the Australian dollar appreciated further by a few percentage points between December and mid-February. In the remaining months of 1972-73 other currencies appreciated their exchange rates against the U.S. dollar, and, being tied to the United States dollar, the Australian dollar generally tended to depreciate.

The currency appreciation and the exchange control measures of September and December 1972 resulted in a net private capital outflow in excess of \$650 million in the second half of 1972-73, compared with a net private capital inflow of \$945 million in the first half of the year. Overall net capital inflow in 1972-73 was \$270 million, compared with \$1,960 million in 1971-72, and was the smallest since 1961-62.

In 1972-73, important new discoveries were made of deposits of oil and gas, uranium and low grade nickel-copper ores, although emphasis was on the development of known mineral deposits. Queensland's largest underground coal mine (Leichhardt) commenced production, the Redross nickel mine in W.A. was being developed for production, mining commenced at Paraburdoo and Shay Gap iron ore deposits in W.A. and at the nickel project at Carr Boyd Rocks, W.A. Iron ore mining operations at Mount Whaleback and Robe River, W.A. were being expanded and pellet production from Robe River ore will reach 4.2 million tons in 1973. Work started on two new bauxite/alumina projects based on bauxite from Darling Range, W.A.; an alumina plant at Gove, N.T. commenced production; and the capacity at the Pinjarra, W.A., alumina plant was doubled and will be further expanded.

A flash smelter for nickel concentrates was commissioned at Kalgoorlie, W.A. and one for copper at Mt Morgan, Qld. Major deposits of heavy mineral sands were delineated at Eneabba, W.A. and two large-scale mining operations are in process to develop the deposits.

Financial conditions were relatively easy in the first half of 1972-73. However the appreciation of the Australian dollar and the exchange control measures of September and December 1972 reduced the volume of overseas borrowings and increased the demands on the domestic market, causing a tightening in conditions and rising interest rates.

Deposits with financial institutions grew substantially during the year. Private non-bank deposits with trading banks in June 1973 were 32 per cent higher than in June 1972, with spectacular increases occurring during the first seven months. Savings Banks deposits in June 1973 were 22 per cent higher than in the previous June. The increases in deposits, together with a 16 per cent increase in the

holdings of notes and coins, resulted in an aggregate rise of 26 per cent in the volume of money during 1972-73, compared with 10 per cent in 1971-72. Permanent building societies' share capital increased its previously high growth during the first seven months of 1972-73 before tapering off after January. This resulted in a sharp reduction in housing loan approvals in the last three months of 1972-73. Finance companies generally continued to expand and balances outstanding increased by about 20 per cent during the year.

Share prices dropped sharply after the sterling float began in Late June 1972 and drifted downwards for several months before picking up to reach a peak in mid-January. Prices then dropped by almost 20 per cent over the next few months, recovering slightly to end the financial year 8 per cent below their level at the beginning of the financial year.

Following the general elections in December the new Australian Government introduced a number of measures, including increases in social service pensions and unemployment and sickness benefits, and additional employment-creating grants to the States. During the year, government final consumption expenditure increased by 14½ per cent, compared with an increase of 13½ per cent in 1971-72, and cash benefits to persons increased by 24 per cent, compared with an increase of 17 per cent in the previous year. In 1972-73 State Governments received a \$112 million permanent increase to the financial assistance grants, and per capita grants to New South Wales and Victoria were permanently increased from \$2 to \$3.50 per head of population. At the June 1973 Premier's Conference the State governments accepted the Australian government's offer to take full financial responsibility for financing tertiary education from 1 January 1974.

#### 1972-73

- 1 July. Special Bonds, Series 'Y' issued at par with interest rates ranging from 5.4 to 6 per cent. An amount of \$44 million was raised for the redemption of Series 'A' to 'X'.
- 3 July. Typists, secretaries and other 'keyboard' employees in the Australian Public Service were granted salary increases ranging from 8 to 14 per cent a year.
- 4 July. Victorian building workers stopped work in support of increased wages and improved conditions.
- 7 July. Increased sick leave benefits were granted to employees under more than 600 Queensland State awards and agreements. The new entitlement increases the quantum of leave from one week to eight days a year, and allows accumulation of the leave to a maximum of 13 weeks absence in any one year.
- 11 July. Technicians and draughtsmen in the Australian Public Service were awarded an increase of \$5.60 a week, backdated to 5 June 1973.
- 14 July. A Commonwealth public loan of 10,000 million Japanese yen issued at par with interest at 6.9 per cent for a period of 10 years.
- 14 July (and during August). Plumbers in New South Wales stopped work in support of demands for increased wages.
- 2 August. The Commonwealth Arbitration Commission granted a 35 hour week to about 500 employees at shipping container depots in Sydney, Melbourne and Adelaide.
- 4 August. Drought aid previously covering Gippsland was extended to farmers in the Mallee and northern Victoria.
- 4 August. A dispute involving maintenance workers in the oil industry which began on 2 June 1972 over a log of claims including a thirty-five hour week, ended when oil companies began delivering supplies of petrol to Sydney. Final settlement was effected on 22 August with the acceptance by unions of pay and leave increases.
- 7 August. Airline ground staff in Victoria and Queensland held a stoppage in support of a claim for higher wages.
- 9 August. West Australian Police were granted increases ranging from \$297 to \$580 a year.
- 10 August. Commonwealth cash loan issued at par with interest at 4.9 per cent for 3 years 3 months, 5.75 per cent for 10 years 2 months, and 6 per cent for 19 years 2 months and 32 years 11 months. An amount of \$203 million was raised. A conversion offer was made on the same terms as the cash loan for \$219 million maturing on 15 August. An amount of \$181 million was converted.
- 10 August. The Federal Government approved increases of up to 15 per cent in fares and freight rates by the Australian National Line on its Tasmanian service.



- 13 *August*. The report of the Randall Committee, set up to investigate all aspects of wool marketing, was tabled in the House of Representatives.
- 15 *August*. The Commonwealth Budget for 1972-73 introduced into the House of Representatives. The Budget provided for estimated expenditure of \$10,077.6 million and estimated receipts of \$9,447.5 million in the year 1972-73. (Details of the 1973-74 Budget as well as the actual budget results for 1972-73 are shown in the Appendix). In 1971-72 receipts of the Commonwealth were \$8,845.4 million, and expenditure amounted to \$9,032.3 million. The main items of revenue (1970-71 figures shown in parenthesis) were: income taxes \$5,303.7 million (\$4,621.8 million); excise duties \$1,212.0 million (\$1,053.3 million); sales tax \$682.8 million (\$633.2 million); customs duties \$467.9 million (\$465.7 million); and payroll tax \$99.1 million (\$295.4 million). The main items of expenditure were: payments to or for the States, and works and housing programs \$3,054.7 million (\$2,843.3 million); payments to the National Welfare Fund \$1,752.2 million (\$1,477.2 million); defence services \$1,217.1 million (\$1,135.0 million); departmental running expenses \$640.8 million (\$543.8 million); advances for capital purposes \$492.7 million (\$448.5 million); Commonwealth payments to industry \$402.1 million (\$316.7 million); repatriation services \$352.4 million (\$314.4 million); and external economic aid \$184.1 million (\$163.1 million).
- 15 *August* (and during September). Nationwide stoppage of metal tradesmen in support of increased wages.
- 15 *August*. The Chairman, Australian Wheat Board announced the sale of a further 250,000 tons of wheat to Chile, making a record annual total of 600,000 tons.
- 18 *August*. (and during September) Manufacturing chemists in various States held a stoppage in support of higher wages.
- 22 *August*. Australian Wheat Board announced the sale of 1 million tons of wheat to the U.S.S.R.
- 23 *August*. Federal Government announced that the amount spent on Universities and Colleges of advanced education in the 1970-72 triennium would be increased by \$200 million for the 1973-75 triennium.
- 24 *August*. The Prime Minister announced that the Federal Government would not revalue the Australian dollar.
- 31 *August*. 1972-73 South Australian Budget introduced, providing for a deficit of \$7,518,000; it was estimated that revenue would be \$509,235,000 and expenditure \$516,753,000. In 1971-72 revenue amounted to \$455,245,000 and expenditure to \$456,311,000 leaving a deficit of \$1,066,000.
- 5 *September*. Queensland Public Servants were awarded a salary increase of 5 per cent a year.
- 7 *September*. 1972-73 Tasmanian Budget introduced, providing for a deficit of \$2,969,000. It was estimated that revenue would be \$175,733,000 and expenditure \$178,702,000. In 1971-72 revenue amounted to \$157,782,000 and expenditure to \$160,237,000, resulting in a deficit of \$2,455,000.
- 11 *September*. Government Advisory Committee on Science and Technology chosen; this committee will assess on a continuing basis Australia's civil-science and technology requirements, resources and potential.
- 11 *September*. Membership of the taxation enquiry committee announced.
- 12 *September*. 1972-73 Victorian Budget introduced, providing for total receipts and expenditure of \$1,362,305,000. Revenues for financing loan programs were estimated at \$261,305,000 (including Commonwealth capital grant payment of \$66,810,000) and loan expenditure were estimated to total \$243,505,000.
- 12 *September*. Metal trade workers accepted an offer of an immediate wage increase of \$3 a week with a further \$3 a week increase in June 1973. These increases subsequently were awarded to workers in other industries.
- 15 *September*. Salary increases of between \$212 and \$489 a year were offered to Australian Public Service Fourth Division Clerical Officers. The increase operated from 5 October 1973.
- 22 *September*. Salaries of clerical and administrative officers in the New South Wales Public Service were increased by  $7\frac{1}{2}$  per cent a year.
- 27 *September*. 1972-73 New South Wales Budget introduced, providing for an overall deficit of \$9,544,000 after allowing for the net results of business undertakings; it was estimated that the receipts and expenditure, excluding business undertakings would be \$1,311,496,000 and \$1,316,120,000 respectively. In 1971-72 the overall deficit was \$5,485,000 while revenue and expenditure, excluding business undertakings, amounted to \$1,112,764,000 and \$1,117,776,000 respectively.

- 28 September. 1972-73 Queensland Budget introduced. It was estimated that revenue would be \$674,560,000 and expenditure \$679,170,000 leaving a deficit of \$4,610,000. In 1971-72 revenue amounted to \$595,218,000 and expenditure to \$592,506,000 leaving a surplus of \$2,712,000.
- 28 September. Australian Wheat Board announced that it had concluded a contract to supply one million tons of wheat to the People's Republic of China.
- 1 October. A conversion offer of Special Bonds Series "Y" was made for \$70 million Special Bonds Series "L" maturing on 1 October. An amount of \$39 million was converted.
- 3 October. The Western Australian Budget for 1972-73 introduced. It was estimated that revenue would be \$469,444,000 and expenditure \$474,521,000 leaving a deficit of \$5,077,000. In 1971-72 revenue amounted to \$423,999,000 and expenditure to \$424,890,000 leaving a deficit of \$891,000.
- 3 October. The Tariff Board published a blue print for the systematic appraisal of the tariff structure, the first since Federation. The review is expected to take six years.
- 5 October (and during November and December). Queensland construction workers stopped work in support of higher wages and improved conditions.
- 7 November. Special Bonds Series 'Z' issued at par with interest rates ranging from 5.4 to 6 per cent maturing on 1 January 1983. An amount of \$48 million was raised of which \$31 million was for the redemption of Series 'A' to 'Y'.
- 8 November. New South Wales teachers were awarded salary increases ranging from \$301 to \$956 a year, backdated to 11 September 1972.
- 9 November. The *Companies (Foreign Takeovers) Act* 1972 came into force.
- 14 November. Commonwealth cash loan issued at par with interest at 4.8 per cent for 2 years 6 months, 5.7 per cent for 9 years 3 months, and 6 per cent for 19 years 11 months and 32 years 8 months. An amount of \$330 million was raised. A conversion offer was made on the same terms as the cash loan for \$243 million maturing on 15 November. An amount of \$219 million was converted.
- 15 November. Teachers in South Australia were awarded salary increases ranging from \$5.80 to \$20.90 a week.
- 21 November. Federal Government used the Foreign Takeovers Act to freeze a number of takeover bids.
- 24 November. Victorian Government blue-collar employees were granted an extra three days paid leave during the Christmas-New Year period.
- 4 December. Following the Federal Election for the House of Representatives the Australian Labor Party became the Government for the first time since 1949.
- 5 December. Commonwealth Police were granted pay rises ranging from \$9 to \$17 a week.
- 7 December. The new Labor Government removed the excise duty on wine.
- 7 December. Nationwide stoppage of airline pilots in support of claims for higher salaries. They returned to work after two days.
- 8 December. Bank officers throughout Australia (except Commonwealth Bank employees), were offered a 5 per cent a year salary increase from 1 January 1973 and a further 4 per cent from 1 June 1973.
- 11 December. South Australia received \$7 million from the Federal Government for unemployment programs. Subsequently similar grants were made to other States. The grants totalled approximately \$50 million.
- 12 December. Following the Government's announcement that liability for call-up under the National Service Act had ended, about two-thirds of National Servicemen elected to remain in the Army thus qualifying for the Federal Government's special benefits—\$1,000 for re-engagement and eligibility for a War Service Home.
- 14 December. South Australia Long Service Leave legislation granted employees under State awards 13 weeks long service leave after 10 years service, and removed the requirement that at least 5 years must be served as an adult before the employee is entitled to pro rata leave. The new legislation came into force 1 July 1973.
- 15 December. The Commonwealth Conciliation and Arbitration Commission outlined the principle of 'equal pay for work of equal value' for adult and junior females. The Commission stated that the principle meant the fixation of award wage rates by a consideration of the work performed irrespective of the sex of the worker. (See page 267.)
- 18 December. New South Wales shop assistants accepted a \$3.50 a week wage increase with a further \$1.50 a week increase in March.

- 20 *December*. Blue collar railway employees in New South Wales, Victoria, South Australia and Tasmania were awarded pay increases ranging from \$3.50 to \$10 a week with a further increase of \$3 a week in July 1973.
- 23 *December*. Further measures to dampen the level of capital inflow were announced, and at the same time the Australian dollar was revalued. The parity of the Australian dollar, expressed in terms of the U.S. dollar, was appreciated by 4.85 per cent. The market rate was fixed at the new parity, giving an overall appreciation of 7.05 per cent.
- 23 *December*. The Government of the United States of America suspended meat imports quotas for 1973.
- 26 *December*. Federal Government reduced Australia's immigration target by 30,000 to 110,000 for 1972-73.
- 1 *January*. The Australian Wool Corporation, formed by amalgamating the Wool Board and the Wool Commission, became operative.
- 3 *January* (and during February). Paper industry employees in various States held stoppages in support of claims for a new award.
- 15 *January*. South Australia Police were granted pay rises ranging from \$356 to \$606 a year.
- 19 *January*. Teachers in South Australia were granted salary increases of 8 to 10 per cent a year under a new award to take effect from 1 February 1973.
- 25 *January*. The Premiers of Victoria and New South Wales and the Prime Minister agreed that the Albury-Wodonga area would be developed as a new growth complex. Land prices in the proposed growth complex in the Albury-Wodonga area were frozen at the 3 October 1972 levels.
- 1 *February*. The United Kingdom-Australia Trade Agreement terminated.
- 6 *February*. A 15 per cent wage increase was granted to shearers and shearing shed hands covered by the Commonwealth Pastoral Industry Award.
- 7 *February*. Engineers and related workers in Federal Government departments, the ABC, the CSIRO and the Snowy Mountains Hydro-electric Authority were granted an 8 per cent pay rise.
- 9 *February*. Teachers in Western Australia were awarded a salary increase of approximately 8 per cent a year.
- 9 *February*. Following the request by BHP to the Australian Government for an inquiry into steel prices, Mr Justice Moore recommended an increase of 3 per cent in the price of steel which was accepted by BHP pro tem.
- 12 *February*. The Reserve Bank ordered the suspension of foreign exchange dealings due to a world monetary crisis caused by the weakness of the \$US.
- 13 *February*. The United States of America devalued its currency by 10 per cent by raising the official price of gold from \$US38.00 to \$US42.22 per oz; Japan allowed the yen to float.
- 13 *February*. Commonwealth cash loan opened on same terms as cash loan of 14 November 1972. An amount of \$166 million was raised of which \$30 million was for the redemption of loans maturing on 15 February. A conversion offer was made on the same terms for \$176 million maturing on 15 February. An amount of \$117 million was converted.
- 13 *February*. An application by workers in the Electricity supply industry for a 35 hour week was rejected by the Industrial Commission of New South Wales.
- 13 *February*. The Australian Bank Officers Association gained an extra week's annual leave from January 1974.
- 14 *February*. The OECD's report on the Australian economy was issued.
- 19 *February* (and during March). Chemical workers in various States held stoppages in support of wage increases.
- 19 *February*. The Queensland basic wage was increased by \$1.30 to \$42.30 for adult males and by \$1.00 to \$32.85 for adult females. The minimum wage for adult males rose by \$1.30 to \$52.80 a week.
- 20 *February* (and during March). Zinc miners in Tasmania held a stoppage in support of wage increases.
- 21 *February*. It was announced that a National Pipeline Authority would be established to build a natural gas pipeline system across Australia.
- 21 *February*. A new Armed Services pay and allowances scheme was approved. It became effective from 8 February.



- 23 *February*. The Government amended the Customs (Prohibited Exports) Regulations to give it power to impose export controls on all minerals, either in raw or semi-processed form.
- 28 *February*. First session of the 28th Parliament opened.
- 8 *March*. Queensland Police were granted pay increases ranging from \$7.42 to \$29.38 a fortnight, operative from January 1973.
- 21 *March*. (and during April) Victorian and Queensland meat workers stopped work in support of wage claims.
- 30 *March*. The salaries of Federal parliamentarians were substantially increased.
- 1 *April*. Clothing trade employees in all states were awarded increases from \$1 to \$4 a week to operate as from the first full pay period commencing on or after 1 April 1973.
- 3 *April*. The Australian Government appointed a special task force headed by Dr H. C. Coombs to "apply a close scrutiny to continuing policies of the previous Government so that room may be found for our own higher priority programs".
- 9 *April*. Federal Government ordered the Reserve Bank to freeze \$100 million in trading bank funds through the SRD account by an increase in SRD ratio from 6.6 per cent to 7.6 per cent.
- 11 *April*. (and during May) Victorian brickmakers stopped work in support of higher wages.
- 18 *April*. Public Service Act 1973 granted Australian Government employees four weeks paid annual leave operative from 1 January 1973. Subsequently State government employees in Victoria, Queensland, Tasmania and Western Australia received similar benefits.
- 1 *May*. (and during June) New South Wales metal workers stopped work in support of wage claims.
- 7 *May*. The tax concession on calls, or other capital moneys paid by investors in mining and prospecting was withdrawn.
- 8 *May*. National Wage Case decision resulted in an increase in Commonwealth award wages of 2 per cent plus \$2.50 a week. The rates of minimum wage for adult males were increased by \$9 a week. These increases operated from the first pay period commencing on or after 29 May. Subsequently similar increases operated in State awards in all States (*see* page 1077) except Queensland and Western Australia (*see below*).
- 9 *May*. Special Bonds, Series "2A" issued at par with interest rates ranging from 5.8 to 6.3 per cent. An amount of \$17 million was raised of which \$10 million was for the redemption of Series "A" to "Z".
- 10 *May*. (and during June) Statewide stoppage by Queensland electricians in support of a claim for higher wages.
- 15 *May*. Commonwealth cash loan issued at par with interest at 5.6 per cent for 2 years 3 months, 6.2 per cent for 10 years 2 months, 6.5 per cent for 20 years 5 months and 30 years 2 months. An amount of \$81 million was raised. A conversion offer was made on the same terms as the cash loan for \$81 million maturing on 15 May. An amount of \$71 million was converted.
- 16 *May*. (and during June) New South Wales builders labourers stopped work in support of demands for permanency of employment.
- 18 *May*. (and during June) In Victoria, vehicle industry workers stopped work in support of increased wages. The dispute spread to other States.
- 23 *May*. The sale of 50,000 tons of sugar to the People's Republic of China on commercial terms was announced.
- 23 *May*. Nurses in Victoria will receive a 10 per cent pay increase from 1 July 1973 and a further 7 per cent from March 1974.
- 24 *May*. Australia and the People's Republic of China agreed to grant each other 'most-favoured-nation' treatment in trade agreements.
- 29 *May*. After negotiation Australia's iron ore producers won about \$80 million a year compensation from Japanese buyers over losses caused by the devaluation of the \$US.
- 29 *May*. Queensland Basic Wage rates were increased by \$1.90 a week for adult males and by \$2.05 a week for adult females. Margins in awards were increased by 2 per cent and the minimum wage for adult males was increased by \$7.70 a week.
- 1 *June*. The *Prices Justification Act* 1973 was assented to, it created a Prices Justification Tribunal which will review individual price increases by companies which have an annual turnover of more than \$20 million. The Act was operative from 1 August 1973.

- 3 June. One day Statewide stoppage by New South Wales electricity supply workers in support of claims for a 35 hour week. Sporadic stoppages followed throughout the month.
- 4 June. (and during July). Queensland meat workers held stoppages in support of various claims.
- 8 June. In Western Australia the basic wage for adult males was increased by \$3.55 a week and by \$3.60 a week for adult females. The minimum wage for adult males was increased by \$3.50 a week.
- 14 June. Legislation amending the Income Tax Assessment Act concerning deductions for life insurance premiums and superannuation contributions became effective.
- 17 June. An Annual Leave loading of  $17\frac{1}{2}$  per cent on award rates was awarded to employees covered by the Metal Trades Award 1952.
- 18 June. Maternity Leave Act granted women employees in the Australian Public Service twelve weeks maternity leave on full pay, with up to additional forty weeks leave without pay. Male employees became eligible for one weeks leave on full pay at the time of the birth of a child.
- 26 June. Government approval was given for a production run of 50 Nomad aircraft.
- 29 June. Commonwealth cash loan opened on same terms as the cash loan of 15 May. An amount of \$91 million was raised.

## APPENDIX

Some recent information which has come to hand since the various chapters were sent to press is given in summarised form in the following pages, but for later statistics on the subjects dealt with in chapters reference should in general be made to other publications issued by this Bureau, e.g. the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, the *Digest of Current Economic Statistics*, and the various mimeographed statements issued on particular subjects.

### CHAPTER 3. GENERAL GOVERNMENT

#### Parliamentary government

##### SECOND WHITLAM MINISTRY—30 NOVEMBER 1973

(The State in which each Minister's electorate is situated is shown in parenthesis. All Ministers are members of the Australian Labor Party and all are in the Cabinet.)

##### *Prime Minister—*

THE HON. E. G. WHITLAM, Q.C., M.P.  
(N.S.W.)

##### *Deputy Prime Minister and Minister for Defence—*

THE HON. L. H. BARNARD, M.P. (Tas.)

##### *Minister for Overseas Trade—*

THE HON. J. F. CAIRNS, M.P. (Vic.)

##### *Minister for Social Security—*

THE HON. W. G. HAYDEN, M.P. (Qld)

##### *Treasurer—*

THE HON. F. CREAN, M.P. (Vic.)

##### *Leader of the Government in the Senate, Attorney-General and Minister for Customs and Excise—*

SENATOR THE HON. L. K. MURPHY, Q.C.  
(N.S.W.)

##### *Minister for Foreign Affairs—*

SENATOR THE HON. D. R. WILLESEE (W.A.)

##### *Minister for the Media—*

SENATOR THE HON. D. MCCLELLAND (N.S.W.)

##### *Minister for Northern Development and Minister for the Northern Territory—*

THE HON. R. A. PATTERSON, M.P. (Qld)

##### *Minister for Repatriation and Minister Assisting the Minister for Defence—*

SENATOR THE HON. R. BISHOP (S.A.)

##### *Minister for Services and Property and Leader of the House—*

THE HON. F. M. DALY, M.P. (N.S.W.)

##### *Minister for Labour—*

THE HON. C. R. CAMERON, M.P. (S.A.)

##### *Minister for Urban and Regional Development—*

THE HON. T. UREN, M.P. (N.S.W.)

##### *Minister for Transport—*

THE HON. C. K. JONES, M.P. (N.S.W.)

##### *Minister for Education—*

THE HON. K. E. BEAZLEY, M.P. (W.A.)

##### *Minister for Tourism and Recreation, Vice-President of the Executive Council and Minister Assisting the Treasurer—*

THE HON. F. E. STEWART, M.P. (N.S.W.)

##### *Minister for Aboriginal Affairs—*

SENATOR THE HON. J. L. CAVANAGH (S.A.)

##### *Minister for Primary Industry—*

SENATOR THE HON. K. S. WRIEDT (Tas.)

##### *Minister for the Capital Territory—*

THE HON. G. M. BRYANT, E.D., M.P. (Vic.)

##### *Minister for Minerals and Energy—*

THE HON. R. F. X. CONNOR, M.P. (N.S.W.)

##### *Minister for Immigration—*

THE HON. A. J. GRASSBY, M.P. (N.S.W.)

##### *Minister for Housing and Construction—*

THE HON. L. R. JOHNSON, M.P. (N.S.W.)

##### *Minister for Secondary Industry and Minister for Supply—*

THE HON. K. E. ENDERBY, M.P. (A.C.T.)

##### *Postmaster-General, Special Minister of State and Minister Assisting the Prime Minister—*

THE HON. L. F. BOWEN, M.P. (N.S.W.)

##### *Minister for Health—*

THE HON. D. N. EVERINGHAM, M.P. (Qld)

##### *Minister for the Environment and Conservation—*

THE HON. M. H. CASS, M.P. (Vic.)

##### *Minister for Science and Minister Assisting the Minister for Foreign Affairs in matters relating to Papua New Guinea—*

THE HON. W. L. MORRISON, M.P. (N.S.W.)



## THE HOUSE OF REPRESENTATIVES, page 72

Consequent on the resignation of the Hon. N. H. Bowen, Q.C. (L.P.), Mr P. M. Ruddock (L.P.) was elected to fill the vacancy for the division of Parramatta in the House of Representatives.

## Commonwealth referendums, page 73

Two referendums on proposals for the amendment of the Constitution were submitted to the electors for approval on 8 December 1973. The first was to enable the Australian Parliament to control prices and the other was to enable the Australian Parliament to legislate with respect to incomes. Both proposals were rejected by the electors in all States. *See* page 73 for requirements for alteration of the Constitution.

A summary of the results of the voting on each proposal follows.

## CONSTITUTION ALTERATION REFERENDUMS, 8 DECEMBER 1973

State	Electors enrolled	Number of votes		Informal	Total
		In favour of the proposed law	Not in favour of the proposed law		
CONSTITUTION ALTERATION (PRICES) REFERENDUM					
New South Wales . . .	2,827,989	1,257,499	1,332,485	28,689	2,618,673
Victoria . . .	2,129,494	891,144	1,081,120	29,660	2,001,924
Queensland . . .	1,128,417	402,506	643,770	9,023	1,055,299
South Australia . . .	737,573	282,754	404,181	13,398	700,333
Western Australia . . .	588,789	169,605	362,121	10,396	542,122
Tasmania . . .	241,207	85,631	138,416	4,969	229,016
Total . . .	7,653,469	3,089,139	3,962,093	96,135	7,147,367

## CONSTITUTION ALTERATION (INCOMES) REFERENDUM

New South Wales . . .	2,827,989	1,041,429	1,542,217	35,027	2,618,673
Victoria . . .	2,129,494	657,756	1,309,302	34,866	2,001,924
Queensland . . .	1,128,417	331,163	713,562	10,574	1,055,299
South Australia . . .	737,573	193,301	490,943	16,089	700,333
Western Australia . . .	588,789	133,531	396,199	12,392	542,122
Tasmania . . .	241,207	63,135	159,862	6,019	229,016
<b>Total . . .</b>	<b>7,653,469</b>	<b>2,420,315</b>	<b>4,612,085</b>	<b>114,967</b>	<b>7,147,367</b>

## Commonwealth Government Departments, pages 73-9

On 30 November 1973 the following changes in the structure of certain Departments were made:

abolition of the Departments of Air, the Army and the Navy and their amalgamation with the Department of Defence;

abolition of the Department of Civil Aviation and its amalgamation with the Department of Transport;

abolition of the Department of Housing and its amalgamation with the Department of Works to form the Department of Housing and Construction;

abolition of the Department of External Territories and the transfer of matters pertaining to aid, and to Papua New Guinea, to the Department of Foreign Affairs.

## CHAPTER 10. LABOUR, WAGES AND PRICES

### Determination of wage rates in Australia

On 8 May 1973, the Commonwealth Conciliation and Arbitration Commission, in its decision in the National Wage Case 1972-73, increased total wage rates for adult males and adult females in Commonwealth awards by 2 per cent plus \$2.50 a week and increased the rates of minimum wage for adult males by \$9.00 a week. These increases were operative from the beginning of the first pay-period commencing on or after 29 May 1973.

Subsequent to this decision, wage rates prescribed in State awards, etc., were increased as follows.

In New South Wales weekly rates of wages in State awards were increased by 2 per cent plus \$2.50 from the beginning of the first pay-period to commence on or after 29 May 1973. These increases incorporated basic wage increases of \$3.30 a week for adult males and \$3.10 a week for adult females to operate from 29 May 1973.

In Victoria total wages for adult males and for adult females in wages board determinations were increased by 2 per cent plus \$2.50 a week and the minimum wage for adult males by \$9.00 a week to operate from the beginning of the first pay-period commencing on or after 29 May 1973.

Queensland State basic wage rates were increased by \$1.90 a week for adult males and by \$2.05 a week for adult females, margins in awards were increased by 2 per cent and the minimum wage for adult males was increased by \$7.70 a week as from 29 May 1973.

In South Australia the living wage for adult males was increased by \$3.30 a week, the living wage for adult females by \$3.10 a week, marginal rates of pay were effectively increased by 2 per cent, and the minimum wage for adult males was increased by \$9.00 a week. These increases were operative from the beginning of the first pay-period commencing on or after 29 May 1973.

In Tasmania margins in State wages board determinations were increased by 2 per cent of the sum of the basic wage and margin; basic wages for both adult males and adult females were increased by \$2.50 a week; and the minimum wage for adult males was increased by \$9.00 a week. These increases operated from the beginning of the first pay-period commencing on or after 29 May 1973.

In Western Australia the basic wage for adult males was increased by \$3.55 a week, the basic wage for adult females by \$3.60 a week, and the minimum wage for adult males by \$3.50 a week. These increases were operative on and from 8 June 1973.

### Leave

The *Maternity Leave (Australian Government Employees) Act* 1973, assented to on 18 June 1973, granted women employees in the Australian Public Service 12 weeks maternity leave on full pay, with up to an additional 40 weeks leave without pay. Male employees became eligible for one week's leave on full pay at the time of the birth of a child; the Act operated retrospectively from 1 January 1973.

## CHAPTER 13. WELFARE SERVICES

### Age, invalid, widows' pensions, unemployment and sickness benefits

Legislation which received Assent on 6 March 1973 increased age, invalid and widows' pensions, unemployment and sickness benefits to the one common rate of \$21.50 (single) or \$37.50 (married) per week. This represented an increase of \$1.50 in the maximum weekly age, invalid and (formerly Class 'A') widows' pensions and unemployment and sickness benefits. Abolition of the division of widows into three categories of entitlement meant an increase of \$4.25 a week for former Class 'B' and Class 'C' widows. Unemployment and sickness benefits and invalid pensions for minors were also raised to the standard \$21.50 rate, an increase of \$8.50 in the maximum weekly payment. All pension increases were retrospective to 7 December 1972. Unemployment and sickness benefits increases applied from 1 March 1973.

The legislation also abolished the age limits of 16 years for full-time student dependants of unemployment and sickness beneficiaries, and 21 years for full-time student dependants of age, invalid and widow pensioners.

## CHAPTER 18. PUBLIC FINANCE

## Federal Budget 1973-74

(see page 1070 for particulars of the 1972-73 Budget)

A significant feature of 1973-74 budget of the Australian Government was its presentation in national accounts form, with outlays classified on a functional basis. A functional classification is intended to bring together outlays with similar objectives or purposes to reveal more fully the broad purposes of public sector spending, to indicate the share of total resources available to public authorities being devoted to particular avenues of expenditure, and to provide a framework for developing assessments of the effectiveness of outlays in meeting government policy objectives. Taken together with the presentation on a national accounts basis the functional classification also facilitates assessment of the economic impact of the identified programs of expenditure.

Given an economy that was operating at close to full capacity, with inflation already of some concern, the Treasurer was faced with the problem of framing a budget that transferred resources to the private sector to initiate major social programs, without adding to the pressures of demand. The budget provided for an estimated outlay of \$12,168 million (18.9 per cent higher than 1972-73) and estimated receipts of \$11,481 million (20.6 per cent higher than 1972-73). The overall budget deficit was estimated at \$687 million, compared with \$709 million in 1972-73. The estimated domestic deficit in 1973-74 was \$162 million compared with a deficit of \$215 million in 1972-73. Details of estimated budget outlay and receipts are shown in the accompanying table.

**Outlay**

On the outlay side, notable aspects were

The large increase in outlay on *Housing and community amenities* reflecting major new programs for urban and regional development, including assistance for new growth centres, sewerage, land commissions, and metropolitan area improvement programs. Provision was also made for low interest advances to the States for welfare housing purposes. Because of the proposal that mortgage interest should be tax deductible, it was decided that the Home Savings Grant Scheme should be discontinued.

The 92 per cent increase in outlay on *Education*, reflecting the Australian Government's assumption of full responsibility for tertiary education from 1974, and substantial increases in funds available for schools and pre-schools—flowing in large part from recommendations by the Interim Committee of the Australian Schools Commission.

An increase of \$1.50 per week in all social service pensions with a further increase of the same amount to be made in the autumn of 1974; and planned abolition of the means test on age pensions in the lifetime of the Parliament. Because of equity considerations it was proposed that age pensions should be taxable, but not to the detriment of those people wholly or largely dependent on the pension. Subsidy payment under the States Grants (Home Care) and Delivered Meals Subsidy Acts would be increased. Special rate repatriation benefits were to be increased by \$4.50 per week, and the general rate by \$3 per week. There were to be increases of the same amount in the autumn sitting, and at the same time the special compensation allowance was to be eliminated.

An increased outlay of 25 per cent on health, including new initiatives in health insurance, community health facilities, a program for additional hospital facilities in Sydney, Melbourne and Brisbane, a school dental scheme and a new emphasis on the health of Aborigines. The scheme providing free milk for school children was to be reduced so that it applied on a needs basis.

An increased outlay on *Economic Services*, including an increased advance to the Post Office of \$32 million, provision of \$32 million for urban transport, a net provision of \$97 million for the Gidgealpa pipeline and estimated direct assistance to industry of an additional \$72 million. At the same time butter and cheese bounty payments were to be reduced and finally phased out in 1974-75, an inspection charge was to be imposed on meat for export, the Government contribution to research undertaken by the Joint Coal Board was to be reduced and to cease by 30 June 1975, and the margin allowed under the petroleum products prices stabilisation scheme was to be increased from 3.3 cents to 5 cents per gallon.



**Receipts**

During 1973-74, the natural growth in tax revenue was expected to be about \$1,621 million (17 per cent). At the same time, discretionary measures were expected to raise an additional \$648 million. Some of the more important of these measures (in terms of their revenue effects) were:

An imposition of income tax on age pensions, reduction of concessional deductions available to life insurance companies, withdrawal of exemption of dividends paid from profits from sale of oil and natural gas and of 20 per cent of profits (and dividends paid from profits) from some mining activities, withdrawal of the allowance for investment in manufacturing plant and discontinuation of some investment and depreciation concessions to primary producers, a higher rate of tax applicable to private companies, and treatment of profits from the resale of property within one year of acquisition as assessable income.

Increased duties on tobacco products, potable spirits, motor spirit, diesel fuel and aviation fuel.

Increases in Australian Capital Territory drivers' licences and motor vehicle registration fees, increased pay-roll tax and stamp duty in the Australian Capital Territory and Northern Territory.

**BUDGET RECEIPTS AND OUTLAY**  
(*\$ million*)

	1972-73	1973-74 Estimate
<b>Outlay—</b>		
Defence . . . . .	1,234	1,266
Education . . . . .	439	843
Health . . . . .	783	979
Social security and welfare . . . . .	2,100	2,439
Housing and community amenities, n.e.c. . . . .	127	538
Culture and recreation . . . . .	117	163
Immigration . . . . .	48	52
<b>Economic services—</b>		
Transport and communication . . . . .	751	880
Water supply and electricity . . . . .	37	56
Industry assistance . . . . .	443	515
Employment conditions . . . . .	54	72
Other economic services . . . . .	40	46
<b>Total economic services . . . . .</b>	<b>1,325</b>	<b>1,568</b>
General public services . . . . .	761	928
Not allocated to function(a) . . . . .	3,297	3,393
<b>Total outlay . . . . .</b>	<b>10,230</b>	<b>12,168</b>
<i>of which—</i>		
Net current expenditure on goods and services . . . . .	2,386	2,645
Gross capital formation . . . . .	230	311
Transfer payments and net advances . . . . .	7,614	9,211
<b>Receipts—</b>		
<b>Taxation—</b>		
Indirect taxes . . . . .	2,634	3,128
Income taxes on companies . . . . .	1,634	1,943
Income taxes on persons—P.A.Y.E. . . . .	3,161	3,940
Other . . . . .	924	1,233
Estate and gift duties . . . . .	73	68
Other direct taxes, fees, fines, etc. . . . .	66	69
Unfunded employee retirement contributions . . . . .	1	25
<b>Total taxation . . . . .</b>	<b>8,492</b>	<b>10,405</b>
<b>Other receipts—</b>		
Interest, rent and dividends, etc. . . . .	951	1,007
Gross income of public enterprises . . . . .	31	13
Sales of existing assets . . . . .	47	56
<b>Total other receipts . . . . .</b>	<b>1,028</b>	<b>1,076</b>
<b>Total receipts . . . . .</b>	<b>9,521</b>	<b>11,481</b>

(a) Includes payments to States n.e.c.



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\* *Also*—1954–55, No. 43, page 833; 1947–48, No. 39, pages 977–8; 1938–39, No. 34, page 451; 1924–25, No. 22, page 695.

## GENERAL INDEX\*

This index is preceded by a list of the special articles, etc., which have appeared in previous issues of the Year Book. The illustrations contained in this issue are listed under the various chapters in the Contents (pages vii–xi). *Where more than one reference to a subject is given, the chief reference, wherever it has been possible to determine it, is indicated by italic type. Two references to a subject so indicated signify major, and approximately equal, importance.*

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\* Flow chart may be purchased separately. price 50c, 70c.

† Prepared jointly by the Bureau of Mineral Resources and the Australian Bureau of Statistics. Available from the Bureau of Mineral Resources, Canberra, the Department of Minerals and Energy, Melbourne and Sydney, and the State Controller, Department of Supply, Brisbane, Adelaide and Perth.



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